CAPE FEAR COMMUNITY COLLEGE

WILMINGTON, NORTH CAROLINA

General Catalog & Student Handbook 1996-97

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CAPE FEAR COMMUNITY COLLEGE

411 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401-3993
(910) 251-5100

CATALOG 1996-1997

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NOTE
The catalog and handbook are published for the purpose of providing information about the College and its programs. Announcements contained herein are subject to change without notice and may not be regarded in the nature of binding obligations on the College or the State. Efforts will be made to keep changes to a minimum, but changes in policy by the North Carolina State Legislature, the Department of Community Colleges, or by local conditions may make some alterations in curricula, fees, etc., necessary.

NONDISCRIMINATION POLICY
Cape Fear Community College's Board of Trustees and Staff recognize the importance of equal opportunity in all phases of the College's operations and have officially adopted a position of nondiscrimination on the basis of race, color, age, religion, national origin, physical handicap, or other non-relevant factors. This policy applies to both students and employees at all levels of the school's operations.

VISITORS
Visitors are always welcome at Cape Fear Community College. The Student Development Office will provide guide service for groups or individuals on weekdays between 8:00AM and 5:00PM and will answer questions about the school and its programs. Prospective students are requested, when possible, to notify the Student Development Office when they are going to visit. This will ensure that appropriate staff will be available for questions. The College is open until 10:00 PM Monday through Friday.

Cape Fear Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees. The address and telephone number of the Southern Association of Colleges and Schools is 1866 Southern Lane, Decatur, GA 30033-4097 (404) 679-4500.

Cape Fear Community College is a member institution of the North Carolina Community College System, the League for Innovation in Community Colleges, and the American Association of Community Colleges.

"ADMISSION TO ANY AND ALL EDUCATIONAL PROGRAMS OFFERED BY CAPE FEAR COMMUNITY COLLEGE IS MADE WITHOUT REGARD TO RACE, COLOR, SEX, RELIGION, NATIONAL ORIGIN, PHYSICAL HANDICAP OR OTHER NON-RELEVANT FACTORS."

Transition to Semester

Cape Fear Community College will change to a semester system beginning Fall of 1997. Faculty, staff and administration will assist students in the transition from quarter to semester hours.

Cape Fear Community College will continue to offer quality degree, diploma and certificate programs. In addition, training for business and industry, continuing education courses, occupational training, and other similar programs will continue as before.

All community colleges in the state of North Carolina will be converting to the semester system Fall of 1997. While our system of academic terms is changing, our mission remains the same.

May 1996
Cape Fear Community College
10,000 copies of this public document were printed at a cost of $8,240.00 or $0.82 each.

Affirmative Action / Equal Opportunity College

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Foreword

The entire Cape Fear Community College family - faculty and staff, trustees, fellow students, and friends and supporters - joins me in welcoming your consideration of Cape Fear Community College as you develop specific plans for your future. Small classes, personable college staff, and lots of individual attention in combination with your dedicated efforts, is a winning formula.

Faculty and staff and over 300 advisory committee members, representing over 160 regional employers, continually review CFCC's programs. This insures that the education and training you receive at Cape Fear Community College is relevant to the workplace of today and tomorrow.

Getting off to a good start is most important. After you've reviewed the information in this catalog, our counselors and faculty advisors welcome the chance to assist you.

Your future begins now — welcome to Cape Fear Community College!

Eric B. McKeithan
President, Cape Fear Community College

Calendar 1996-97

Fall Quarter 1996

Registration	September 3-4, 1996
In-Service	September 5-6, 1996
Classes Begin	September 9, 1996
Drop/Add Period	September 9-10, 1996
Advisement Period	October 21 - November 1, 1996
Pre-registration for Winter	November 5, 1996
Classes End	November 22, 1996

Winter Quarter 1996

Registration	November 25, 1996
Holiday	November 28-29, 1996
Classes Begin	December 2, 1996
Drop/Add Period	December 2-3, 1996
Christmas Break	December 23 - January 1, 1997
Classes Resume	January 2, 1997
Holiday	January 20, 1997
Advisement Period	January 27 - February 7, 1997
Pre-Registration for Spring	February 11, 1997
Classes End	February 27, 1997

Spring Quarter 1997

Registration	March 3, 1997
Classes Begin	March 4, 1997
Drop/Add Period	March 4-5, 1997
Holiday	March 28, 1997
Advisement Period	April 21 - May 2, 1997
Pre-registration for Summer	May 6, 1997
Pre-registration for Fall	May 13, 1997
Classes End	May 20, 1997
Graduation	May 21, 1997
Holiday	May 26, 1997

Summer Quarter 1997

Registration	May 27, 1997
Classes Begin	May 28, 1997
Drop/Add Period	May 28-29, 1997
Holiday	July 4, 1997
Advisement Period	July 21-25, 1997
Pre-registration for Fall	July 29, 1997
Classes End	August 8, 1997
Graduation	August 8, 1997

Administration

Dr. Lloyd V. Hackley ..... President, North Carolina Community College System

Dr. Eric B. McKeithan ..... President, Cape Fear Community College

STATE BOARD OF COMMUNITY COLLEGES

Mrs. Barbara K. Allen ..... Raleigh, NC
The Honorable Harlan E. Boyles, State Treasurer, Ex Officio ..... Raleigh, NC
Dr. Jeannette Council ..... Fayetteville, NC
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Mrs. Winifred J. Wood ..... Camden, NC
Mr. James J. Woody, Jr. ..... Roxboro, NC

LOCAL BOARD OF TRUSTEES

Mr. Charles Agnoff ..... Wilmington, NC
Dr. Mary Sutton Bell ..... Currie, NC
Mrs. Sherry W. Bryan ..... Wilmington, NC
Mr. Carl A. Byrd, Sr. ..... Wilmington, NC
Mr. Stephen H. Davenport, Jr. ..... Wilmington, NC
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Mr. Robert S. Rippy ..... Wilmington, NC
Mr. Jon W. Rosborough ..... Wilmington, NC
Mr. William C. Taylor ..... Wilmington, NC
Dr. James E. Vann ..... Wilmington, NC
President, Student Government Association ..... Cape Fear Community College

Mission Statement for the North Carolina Community College System

The mission of the North Carolina Community College System is to open the door to opportunity for individuals seeking to improve their lives and well-being by providing: education, training and retraining for the workforce, including basic skills and literacy education, occupational and pre-baccalaureate programs; support for economic development through services to business and industry; and services to communities and individuals which improve the quality of life.

Adopted by the State Board of Community Colleges, 10/93. Revised 3/10/94, 4/15/94.

Mission Statement for Cape Fear Community College

Cape Fear Community College is an open door, comprehensive community college that strengthens the academic, economic, social and cultural life of the citizens of New Hanover and Pender counties by promoting enrichment through lifelong learning.

As a member of the North Carolina Community College System, Cape Fear Community College fully supports the system mission and fulfills its purposes by:

- Focusing on vocational, technical, pre-baccalaureate, basic skills and literacy education, and continuing education programs and services;
- Recruiting, enrolling, advising and retaining a diverse student body;
- Recruiting, retaining and developing a qualified and diverse faculty and staff who are dedicated to quality education and service to the College and the community;
- Evaluating existing programs and implementing new curricula to serve the changing needs of the service area;
- Providing financial, academic, and technological programs and support services that are accessible and help students succeed; and
- Interacting and cooperating with others to encourage, promote and facilitate economic and community development.

Approved by the CFCC Board of Trustees, 3/23/95. Revised 1/18/96.

CFCC Strategic Goals for 1996-97

1. Foster institutional excellence in instruction and instructional support services throughout the institution.

2. Improve program quality and document quality through more refined assessments of learning outcomes.

3. Promote diversity at all levels within the institution.

4. Increase access to all college programs, with particular emphases in occupational extension programs designed for business and industry and in community-based adult basic education.

5. Strengthen institutional development efforts including marketing, institutional effectiveness, and fundraising.

6. Enhance student life through expansion and/or refinement of student development activities and services.

7. Develop an effective enrollment management system including improved enrollment, advisement processes, and goal achievement.

8. Forge stronger linkages with business and industry, governmental agencies, and other employers in order to stimulate economic development and to enhance job opportunities for graduates.

9. Maintain or increase professional development opportunities for faculty and staff, specifically in the use of campus-wide information technologies.

10. Maintain aggressive schedule for construction of new facilities.

The College

History

The College was established as the Wilmington Industrial Education Center in 1959 under the direction of the late George H. West. It was raised to technical institute status on July 1, 1964 and renamed Cape Fear Technical Institute. To more clearly reflect the role and mission of the College, the Board of Trustees recommended that the College again change its name. The New Hanover County Commissioners concurred with the Board, and on January 1, 1988 the College officially became Cape Fear Community College (CFCC).

CFCC is one of fifty-eight such institutions operated by the State under the direction of the State Board of Community Colleges and administered by a local Board of Trustees. The System was authorized by the North Carolina General Assembly, Chapter 115D (originally 115A) of the General Statutes.

The College was one of the original industrial education centers and was operated from 1959 until 1963 by the New Hanover Board of Education. Following a favorable vote of the citizens of the County on a $575,000 bond issue to provide a technical institute facility and a $0.02 tax levy for its support, $500,000 in matching funds from the 1963 Vocational Education Act Appropriation was authorized to be applied toward facility construction.

The College continued to operate in County-owned buildings until new facilities were completed in the summer of 1967. These facilities included a four story main building, a separate automotive shop, and a pier and docking facility for the school's training vessels.

In 1969 the College was granted status as a Special Purpose Institute by the Southern Association of Colleges and Schools. The following year the Southern Association's Commission on Colleges granted membership to the College contingent upon successfully completing a self-study within the next five years. This was accomplished and at the Association's annual meeting in 1975, the College was granted full membership status.

In the General Election of 1972, the citizens of New Hanover County approved another bond issue for $3,676,000 for the expansion of the College's facilities. This resulted in construction of a seven story building that provided valuable additional classrooms, shops, and office space, with one floor devoted to the Learning Resources Center.

In 1982 and 1989 the New Hanover County Commissioners responded favorably to a request made by the Board of Trustees for facilities to house the electronic and instrumentation technologies curricula and the renovation of one of its buildings to house classrooms, lab, and office space for the new Associate Degree Nursing program.

In 1986 and again in 1988 the State Legislature appropriated $300,000 for the construction of a satellite facility in Pender County. With the Pender County Commissioners donating 11 acres of land, $200,000, and an additional $75,000 for landscaping, to that already appropriated by the Legislature, a 15,000 square foot building was opened at the Pender County Campus in Burgaw in June 1990.

The citizens of North Carolina voted on November 2, 1993 to pass a $8.3 million bond referendum for CFCC. On March 8, 1994 the residents of New Hanover County passed another bond referendum which will provide an additional $13.9 million to provide four major buildings for the College.

March 1994, Cape Fear Community College began day and evening classes in the vacant Topsail Middle School building. This gave Pender County a second satellite unit for the College. The CFCC campus in Burgaw serves the citizens of western Pender County and the Hampstead Campus provides classes and instruction for Pender County residents on the eastern side of the county.

The number of people served annually by the College has risen from approximately 750 during its early years of operation to more than 21,000 in recent years.

Location

Cape Fear Community College is conveniently located in the heart of Wilmington on North Front Street. The campus extends from Front Street to the deep water channel of the Cape Fear River and is bordered by Red Cross Street on the north and Walnut Street on the south.

The Fred J. Galehouse Building houses the administrative offices, business office, classrooms, chemical and criminalistics laboratories, and part of the shop areas. The M.J. McLeod Building houses the Student Development office, Learning Resources Center (library), laboratories, classrooms, cafeteria, and the student lounge area. Two additional shop buildings (the Richard L. Burnett and the William T. Emmart) are located at the water's edge, and a pier extends out to the deep-water channel to provide mooring for the school's training vessels. The buildings are of all-masonry construction and designed especially for trade and technical programs. All classrooms and offices are air-conditioned for year-round comfort.

Shops and Equipment

The shops and laboratory areas were carefully planned to provide large, well-ventilated, and industry-type training facilities.

Equipment for all shops, laboratories, test areas, drafting rooms, and for the training ships is selected to conform with the current tools and devices of industry. Students will find that ample opportunity is provided in all trade and technical curricula for skill-building practice in using modern industrial tools and machines. Classrooms for study of the academic

related subjects are conveniently located; a well-stocked technical library is available both day and night.

Areas of Study

Curricula which the College is presently authorized to offer include the following:

Technical Curricula:
(See pages 31 to 73 for course descriptions)

- Accounting
- Administrative Office Technology
- Associate Degree Nursing
- Automotive Technology
- Basic Law Enforcement Training (Certificate Program)
- Business Administration
- Chemical Technology
- Computer Engineering Technology
- Criminal Justice - Protective Service Technology
- Drafting and Design Engineering Technology
- Early Childhood Associate
- Electronics Engineering Technology
- Hotel and Restaurant Management
- Instrumentation Technology
- Interior Design*
- Machining Technology
- Manufacturing Engineering Technology
- Marine Technology
- Paralegal Technology
- Pharmacy Technology*
- Radiography
- Real Estate (Technical Specialty) (Certificate Program)
- Real Estate Appraisal (Certificate Program)

Students graduating from these programs are awarded the Associate in Applied Science Degree.

Vocational Curricula:
(See pages 81 to 92 for course descriptions)

- Air Conditioning, Heating & Refrigeration
- Boatbuilding
- Dental Assisting
- Industrial Electricity
- Industrial Mechanics
- Light Construction
- Marine and Diesel Mechanics
- Medical Transcription*
- Phlebotomy (Certificate Program)
- Practical Nursing
- Truck Driver Training**
- Welding

Diplomas are earned by graduates of these vocational programs.

* Pending approval by the State Board of Community Colleges. Anticipated start date is Fall of 1996.

*Truck Driver Training is currently offered in Continuing Education and will be offered as a curriculum program, pending State Board approval.

College Transfer
(See pages 31 to 73 for course descriptions)

Students who graduate from the College Transfer Curriculum are awarded the Associate in Arts degree.

Admissions

Admissions Statement

CFCC operates under an open door policy. This means that the College offers instruction to all adults. So if you are 18 years of age or older, or if you have a high school degree or equivalent, and can benefit from courses and programs offered by our College, WE WELCOME YOU.

While CFCC advises all students to seek a high school diploma or equivalent, admission to vocational or certificate programs may be granted without prior completion. Exceptions are students entering the Dental Assisting, Phlebotomy and Practical Nursing programs; these students must hold high school diplomas or a recognized equivalency.

Students who do not wish to enter degree or diploma programs or are high school students who have special concurrent enrollment permission may enter CFCC as a "special credit" or "T-301" (technical), "V-301" (vocational) or "C301" (college transfer) student. Students may be admitted as special credit students; however, these students may only carry a part-time course load. Also, special credit students must have their registration cards approved by a counselor. (Special credit students may not register for classes until class space is open to the general public.) Admission as a special credit student does not constitute admission to any curriculum program. Special credit students may attempt no more than 27 credit hours without meeting admissions requirements. Students who exceed this number will not be permitted to register until admissions requirements are met. Also, students who enter a curriculum program from special credit status as well as students who receive veterans benefits or financial aid must meet all admissions requirements prior to time of registration. Exceptions are programs which do not culminate in a degree or diploma. Admissions requirements do not apply to these programs.

Admissions Process

1. Application
An application for admission must be submitted prior to registration.

2. Official high school or General Educational Development (GED) Transcript.
An official high school or GED transcript must be sent directly to CFCC from the high school last attended, school which proctored the GED, or state-level GED agency.

3. Official College Transcript(s)
Official college transcripts from all institutions of higher education previously attended must be submitted to CFCC.

4. Assessment Evaluation
Students are required to take the assessment evaluation prior to enrollment. (There is no charge for the evaluation.) Assessment evaluation results are used to determine whether students need to enhance their skills in academic areas. Prior college course completion could eliminate this requirement. Students will need to consult with counselors.

5. Medical Examination
A medical history is required for specific program admission or completion. Students are notified of this requirement as applicable to their program of study.

Selective Admission/Health Service Programs

Certain CFCC academic programs have additional entrance requirements. Students applying for admission to those selective admission programs must meet general college admission requirements as well as specific program requirements.

Each of the selective admission programs requires that applicants be a high school graduate or have a GED, meet the minimum placement test scores required for the specific degree program and complete the program application process by the deadline established for that particular program.

Selective admission programs include: Associate Degree Nursing, Dental Assisting, Pharmacy Technology, Phlebotomy, Practical Nursing and Radiography.

Students may visit the Admissions and Records Office for specific program requirements and applications.

Admission of Transfer Students

1. Transfer students must complete CFCC's admission requirements.

2. Credits are transferred from regionally accredited institutions. Courses are transferred that compare in content, quality and credit hours to those offered at CFCC.

3. Only courses with a grade of C or better will be transferred from other institutions to CFCC.

4. Credits transferred from other institutions will be denoted on the students CFCC transcript by CT (Course Transfer). Grades achieved at other institutions will not be used in the grade point average computation at CFCC.

5. Credit gained through advancement placement testing, experiential learning or proficiency testing will not be transferred directly as course work.

6. Students should submit copies of all transcripts early enough so that evaluation of transfer credit can be completed prior to registering for classes. Transfer credit for those transcripts received during the registration process will be completed by the end of the first quarter of enrollment.

7. To receive a degree from CFCC, transfer students must complete at least 25 percent of program requirements at CFCC.

Admission of Transient Students

Transient students are those who are admitted and enrolled in another college or university and wish to enroll in CFCC as a full-time students for one quarter.

Transient Students must:

1. Submit a completed CFCC Admission Application

2. Submit written permission from their home institution to enroll in CFCC

3. Provide verification of completion of applicable prerequisites prior to enrolling in CFCC courses

Provisional Admission

Students whose official transcripts have not been received by the Admissions Office at the time of registration may be admitted provisionally. All admissions requirements must be met within thirty (30) calendar days from the first day of the quarter. Those students who do not meet admissions requirements within thirty (30) calendar days may be dropped from courses and will not be allowed to register until all admission requirements are met. Provisionally admitted students are required to take the asset assessment prior to registration.

Admission of Out-of-State Students

Out-of-state students are admitted under the same admission standards as residents of North Carolina. Residency classification for out-of-state students will be determined by the laws of the State of North Carolina. At the time of admission, the Director of Enrollment Management will determine the residency status of the applicant based on the information supplied on the application and any other data deemed appropriate by the Director of Enrollment Management. If the applicant is not satisfied with the residency classification assigned by the Director of Enrollment Management, a written appeal to the Director of Enrollment Management must be filed within ten (10) days following the first notification of residency status. Applicants wishing additional information about the laws of North Carolina governing residency classification for students should make inquiry to the Office of Student Development, where copies of the law are maintained.

Admission of International Students

The school is authorized under Federal law to admit nonimmigrant alien students. Contact the Director of Enrollment Management for admission procedures.

COLLEGE TRANSFER

The College Transfer program is designed to provide a broad background in the core courses of a liberal arts curriculum comprising the first two years of a four-year baccalaureate degree.

Since requirements vary, it is the responsibility of each student to determine the specific requirements of the senior institution to which he or she plans to transfer. The student should also be advised that while individual courses may be considered for transfer credit, most institutions give preference to applicants who have completed the Associate in Arts Degree.

A student is eligible to be granted the Associate in Arts Degree upon completion of 96 quarter hours credits including all required minimums outlined in the following listing. Only courses numbered 150 to 199 and 250 to 299 may be included for credit in this program.

All statements in this publication are announcements of present policies and are subject to change at any time without prior notice. Cape Fear Community College reserves the right to change program requirements and offerings, regulations, and fees.

Basic Studies Requirement			Required Quarter Hours Credit
Communication			**10**
ENG	151	English Composition I	5
ENG	152	English Composition II	5
Fine Arts			**5**
Select one fine arts course from the following:			
ART	152	Drawing Fundamentals	5
ART	153	Drawing II	5
ART	155	Beginning Painting	5
ART	251	Art in the Western World: Ancient Through Medieval	5
ART	252	Art in the Western World: Renaissance Through Impressionism	5
ART	253	History of Art in the Western World: Post-Impressionism Through Contemporary	5
DRA	150	Introduction to Theater	5
DRA	175	Introduction to Film	5
MUS	150	Survey of Music Literature	5
Humanities			**10**
Select one humanities course from two of the following three areas:			
1.			
ENG	160	Introduction to Literature	5
ENG	251	Great British Writers I	5
ENG	252	Great British Writers II	5
ENG	263	Great American Writers I	5
ENG	264	Great American Writers II	5
ENG	275	World Literature I	5
ENG	276	World Literature II	5
2.			
PHI	150	Introduction to Philosophy	5
PHI	160	Introduction to Ethics	5
REL	150	Introduction to Religion	5
REL	250	Religion in America	5
3.			
FRE	150	French I	5
FRE	151	French II	5
SPA	150	Spanish I	5
SPA	151	Spanish II	5
Mathematics			**5**
Select one course from the following:			
MAT	150	College Mathematics I	5
MAT	160	College Algebra	5
MAT	190	Precalculus	5
MAT	250	Calculus I	5
Natural Sciences			**12**
Select one of the following 12-quarter-hour credit sequences from one of the following areas:			
Life Sciences			
1.			
BIO	150	General Biology I	6
BIO	151	General Biology II	6
2.			
BIO	250	Anatomy and Physiology I	6
BIO	251	Anatomy and Physiology II	6
Physical Sciences			
PHY	150	College Physics I	4
PHY	151	College Physics II	4
PHY	152	College Physics III	4
Physical Education			**3**
PED	150	Foundations of Physical Activity	3
Social and Behavioral Sciences			**15**
Select one history course from the following:			
HIS	150	Western Civilization I	5
HIS	151	Western Civilization II	5
HIS	250	American History I	5
HIS	251	American History II	5
Select one course from two of the following three areas:			
1.			
POL	150	American National Government	5
POL	250	American State and Local Government	5
2.			
PSY	150	Introduction to Psychology	5
3.			
SOC	150	Introduction to Sociology	5
Total Basic Studies Requirement in Quarter Hours			**60**

Electives
Any of the courses listed above which are not used to meet the basic studies requirement may be used as electives. In addition, the following courses are approved electives.

ANT	150	Introduction to Anthropology	5
ART	150	Design Basics (2-D)	5
BIO	252	Microbiology	6
CJC	150	Introduction to Criminal Justice	5
CJC	250	Contemporary Issues in Criminal Justice	5
DRA	160	Introduction to Acting	5
DRA	161	Play Production	5
ECO	150	Principles of Microeconomics	5
ECO	151	Principles of Macroeconomics	5
EDU	250	Teacher, School, and Society	5
ENG	155	Writing for Business and Industry	5
ENG	250	Folklore	5
ENG	255	Introduction to Creative Writing	5
FRE	152	French III	5
GEO	150	Introduction to Physical Geography	5
MAT	151	College Mathematics II	5
MAT	161	College Trigonometry	5
MAT	165	Introduction to Statistics	5
MAT	251	Calculus II	5
MUS	151	Introduction to Music History I	5
MUS	152	Introduction to Music History II	5
MUS	153	Music in America	5
ORI	150	Seminar: Lifelong Learning	5
PHO	150	Introduction to Photography	3
PSY	175	Psychology of Adjustment	5
PSY	250	Human Growth and Development	5
PSY	298	Abnormal Psychology	5
REL	198	World Religions	5
SOC	250	Sociology of the Family	5
SOC	260	Sociology of Deviant Behavior	3
SOC	265	Sociology of Juvenile Delinquency	3
SOC	270	Modern Social Problems	5
SPA	160	Introductory Spanish	5
SPH	150	Introduction to Speech	5
SPH	155	Public Speaking	5
SWK	150	Introduction to Social Work	5

Total Electives Requirement in Quarter Hours 36

TOTAL REQUIREMENT IN QUARTER HOURS 96

Some four-year colleges require foreign language courses and additional humanities and mathematics courses for either junior standing or a baccalaureate degree. Also, some colleges may not accept certain of the listed elective courses for transfer credit. For this reason, students planning to transfer should check the requirements and transfer policies of the four-year institution they wish to attend and select courses accordingly.

TECHNICAL CURRICULA

Technicians are among the fastest growing occupational groups in the United States. In recent years, the needs of an expanding and increasingly technical economy have greatly intensified the demand not only for engineers and scientists, but also for the technical workers who assist them. Technicians are those workers whose jobs require both knowledge and use of scientific and mathematical theory, specialized education or training in some aspect of technology or science, and work, with scientists and engineers. Some jobs held by these technicians are supervisory and require both technical knowledge and the ability to supervise people.

In carrying out their assignment, engineering and science technicians frequently use complex electronic and mechanical instruments, experimental laboratory apparatus, and drafting instruments. These workers engage in virtually every aspect of engineering and scientific work. In research, development, and design work they conduct experiments or tests; set up, calibrate, and operate instruments; and make calculations. They also assist scientists and engineers in developing experimental equipment and models by making drawings and sketches and frequently do some design work.

Technicians also work in jobs related to production. They may aid in the various phases of production operations, such as working out specifications for materials and methods of manufacturing, devising tests to insure quality control of products, or making time-and-motion studies (timing and analyzing the worker's movements) designed to improve the efficiency of a particular operation. They may also perform liaison work between engineering and production or other departments.

Cape Fear Community College provides training in a number of areas which require training beyond the high school, but do not require four years of college preparation. Most of the technical programs are six quarters in length and are geared to train a person in specific technical areas. Students spend twenty to thirty hours per week in classroom and laboratory work; additional time will be needed for outside assignments.

The Associate in Applied Science Degree is awarded to students who complete a technical program. To be eligible for the degree, a student must maintain satisfactory grades in all laboratory and class subjects and an overall grade point average of 2.00.

Credit hours granted in the various technical programs are not transferrable to other institutions except as an institution may determine that a particular course and credits are applicable to a curriculum offered by that school.

	Authorized Programs	Code	Day	Evening	Degree	Certificate
1	**Accounting**	**T016**			**AAS**	
2	**Administrative Office Technology**	**T030**			**AAS**	
3	**Associate Degree Nursing**	**T059**			**AAS**	
4	**Automotive Technology**	**T176**			**AAS**	**Diploma**
5	**Basic Law Enforcement Training**	**T189**				*
6	**Business Administration**	**T018**			**AAS**	
7	**Chemical Technology**	**T037**			**AAS**	
8	**Computer Engineering Technology**	**T040**			**AAS**	
9	**Criminal Justice - Protective Services Technology**	**T129**			**AAS**	
10	**Drafting and Design Engineering Technology**	**T043**			**AAS**	
11	**Early Childhood Associate**	**T073**			**AAS**	
12	**Electronics Engineering Technology**	**T045**			**AAS**	
13	**Hotel and Restaurant Management**	**T025**			**AAS**	
14	**Instrumentation Technology**	**T048**			**AAS**	
15	**Interior Design ****	**T077**			**AAS**	
16	**Machining Technology**	**T121**			**AAS**	**Diploma**
17	**Manufacturing Engineering Technology**	**T050**			**AAS**	
18	**Marine Technology**	**T085**			**AAS**	
19	**Radiography**	**T061**			**AAS**	
20	**Paralegal Technology**	**T120**			**AAS**	
21	**Pharmacy Technology ****	**T161**				**Diploma**
22	**Real Estate (Technical Specialty)**	**T166**				*
23	**Real Estate Appraisal**	**T224**				*

AAS - Associate in Applied Science Degree
**** Pending approval by the State Board of Community Colleges. Anticipated start date is Fall, 1996.**

Accounting

The Accounting curriculum is designed to provide students with knowledge and skills necessary for employment and growth in the accounting profession. Often referred to as the "language of business," accounting serves as an informational system for organizations. Accountants assemble, analyze, and communicate essential information about financial operations.

The course of study places emphasis on accounting principles, theories, and practices and includes study in business law, finance, management, and economics. Skills related to the applications of accounting principles are developed through study of communications, computer applications, interpersonal skills development, decision making principles, and ethics.

The curriculum is designed to prepare individuals for entry-level accounting positions in all types of organizations, including CPA firms, small businesses, manufacturing firms, insurance companies, banks, and nonprofit organizations such as hospitals, colleges, school systems, and governmental agencies. With work experience and additional education, an individual may advance to positions such as accountant, controller, and auditor.

MAJOR COURSES		**Credit**
ACC 120	Accounting I	5
ACC 121	Accounting II	5
ACC 122	Accounting III	5
ACC 128	Computerized Accounting	3
ACC 129	Taxes I	4
ACC 220	Intermediate Accounting I	4
ACC 221	Intermediate Accounting II	4
ACC 225	Cost Accounting I	4
ACC 226	Cost Accounting II	4
ACC 230	Taxes II	4
ACC 231	Auditing	4
BUS 123	Business Finance I	4
BUS 124	Business Finance II	4
BUS 135	Advanced Business Applications	4
		58
RELATED		
BUS 114	Business Statistics	3
BUS 115	Business Law I	5
BUS 235	Business Management	3
CAS 101	Computer Familiarization	3
CAS 109	Database Processing	4
CAS 125	Microcomputer Word Processing I	4
CAS 130	Spreadsheet Applications I	2
CAS 211	Spreadsheet Applications II	2
ECO 102	Economics I	3
ECO 104	Economics II	3
OSC 105	Keyboarding	4
		36

GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 114	Oral Communications	3
MAT 121	Technical Mathematics	5
PSY 150	Introduction to Psychology	5
___ ___	Humanities/Fine Arts Elective	5
		23

TOTAL CREDITS **117**

ACCOUNTING

The six-quarter sequence of courses recommended for the full-time student is:

I-FALL
BUS 115
CAS 101
ENG 114
MAT 121
OSC 105

II-WINTER
ACC 120
BUS 135
CAS 130
PSY 150
HUMANITIES/FINE ARTS ELECTIVE

III-SPRING
ACC 121
BUS 114
CAS 125
CAS 211
ENG 151

IV-FALL
ACC 122
ACC 128
ACC 129
CAS 109
ECO 102

V-WINTER
ACC 220
ACC 225
ACC 230
BUS 123
ECO 104

VI-SPRING
ACC 221
ACC 226
ACC 231
BUS 124
BUS 235

Administrative Office Technology

This curriculum prepares individuals to perform secretarial and administrative support duties in a variety of offices including those offices with computerized, automated functions.

Students in this curriculum study keyboarding and word/information processing to develop skills in the preparation of business correspondence, reports, statistical copy, manuscripts and business forms. Administrative support courses emphasize typical office tasks such as scheduling appointments, composing correspondence and performing reprographic duties. Training is also provided in analyzing and coordinating office duties and systems. Skills and knowledge are taught in the areas of electronic document storage and retrieval and computer software utilization.

Graduates of the program may be employed in offices in private business establishments involved in retailing, marketing, advertising, and manufacturing as well as offices in local, state, and federal government.

MAJOR COURSES		Credit Hours
BUS 236	Human Resource Management	3
CAS 101	Computer Familiarization	3
CAS 109	Database Processing	4
CAS 125	Microcomputer Word Processing I	4
CAS 126	Microcomputer Word Processing II	4
CAS 130	Spreadsheet Applications I	2
CAS 208	Desktop Publishing	3
CAS 211	Spreadsheet Applications II	2
OSC 105	Keyboarding	4
OSC 118	Document Production	4
OSC 119	Advanced Document Production	4
OSC 120	Administrative Office Applications I	2
OSC 121	Administrative Office Applications II	2
OSC 200	Information Management	4
OSC 213	Office Procedures	3
OSC 217	Comprehensive Speedwriting	5
OSC 240	Comprehensive Machine Transcription	5
		58

RELATED COURSES		
ACC 120	Accounting I	5
ACC 121	Accounting II	5
ACC 129	Taxes I	4
BUS 109	Professional Development	3
BUS 115	Business Law I	5
BUS 135	Advanced Business Applications	4
ECO 102	Economics I	3
		29

GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 114	Oral Communications	3
MAT 121	Technical Mathematics	5
PSY 150	Introduction to Psychology	5
___ ___	Humanities/Fine Arts Elective	5
		23

ELECTIVES		
___ ___	Elective	3
		3

WORK EXPERIENCE		
COE 101	Cooperative Work Experience	(1)
COE 102	Cooperative Work Experience	(1)
COE 103	Cooperative Work Experience	(1)
		(3)

TOTAL CREDITS **113**

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the co-op director and department chairperson.

ADMINISTRATIVE OFFICE TECHNOLOGY
The six-quarter sequence of courses recommended for the full-time student is:

I-FALL
BUS 115
CAS 101
ENG 114
MAT 121
OSC 105

II-WINTER
ACC 120
BUS 135
BUS 236
OSC 118
HUMANITIES/FINE ARTS ELECTIVE

III-SPRING
ACC 121
BUS 109
ENG 151
OSC 119
PSY 150

IV-FALL
ACC 129
CAS 109
CAS 125
ECO 102
OSC 240

V-WINTER
CAS 126
CAS 130
OSC 120
OSC 200
OSC 217

VI-SPRING
CAS 208
CAS 211
OSC 121
OSC 213
ELECTIVE

Associate Degree Nursing, Registered Nursing

The Associate Degree Nursing curriculum is designed to prepare the graduate to assess, analyze, plan, implement and evaluate nursing care. The graduate is eligible to apply to take the National Council Licensure Examination (NCLEX-RN) which is required for practice as a registered nurse.

Individuals desiring a career in registered nursing should take biology, algebra, and chemistry courses prior to entering the program.

The registered nurse may be employed in a wide variety of health care settings such as hospitals, long term care facilities, clinics, physician's offices, industry and community health agencies.

MAJOR COURSES		Credit
NUR 101	Fundamentals of Nursing	7
NUR 102	Common Stressors in Medical-Surgical Nursing	9
NUR 103	Medical-Surgical Nursing I	10
NUR 104	Maternal-Child Nursing	10
NUR 105	Issues and Trends	2
NUR 201	Psychiatric Nursing	6
NUR 202	Patient Care Management	1
NUR 203	Medical-Surgical Nursing II	10
NUR 204	Medical-Surgical Nursing III	10
		65
RELATED COURSES		
BIO 250	Anatomy and Physiology I	6
BIO 251	Anatomy and Physiology II	6
BIO 252	Microbiology	6
		18
GENERAL EDUCATION		
ENG 151	English Composition I	5
PSY 250	Human Growth and Development	5
PSY 150	Introduction to Psychology	5
___ ___	Humanities/Fine Arts Elective	5
		20
ELECTIVE		5
		5
TOTAL CREDITS		**108**
NUR 120	Nursing Transition	8

Required of LPN's prior to admission to ADN program.

AUDIT COURSES		
NUR-101A	Fundamentals of Nursing	7
NUR 102A	Common Stressors in Medical-Surgical Nursing	5
NUR 103A	Medical-Surgical Nursing I	6
NUR 104A	Maternal-Child Nursing	8
NUR 201A	Psychiatric Nursing	4
NUR 203A	Medical-Surgical Nursing II	6

ASSOCIATE DEGREE NURSING

I-FALL
BIO 250
NUR 101
PSY 150

II-WINTER
BIO 251
NUR 102
PSY 250

III-SPRING
BIO 252
NUR 103

IV-SUMMER
NUR 104
NUR 105

V-FALL
ENG 151
NUR 201
NUR 202

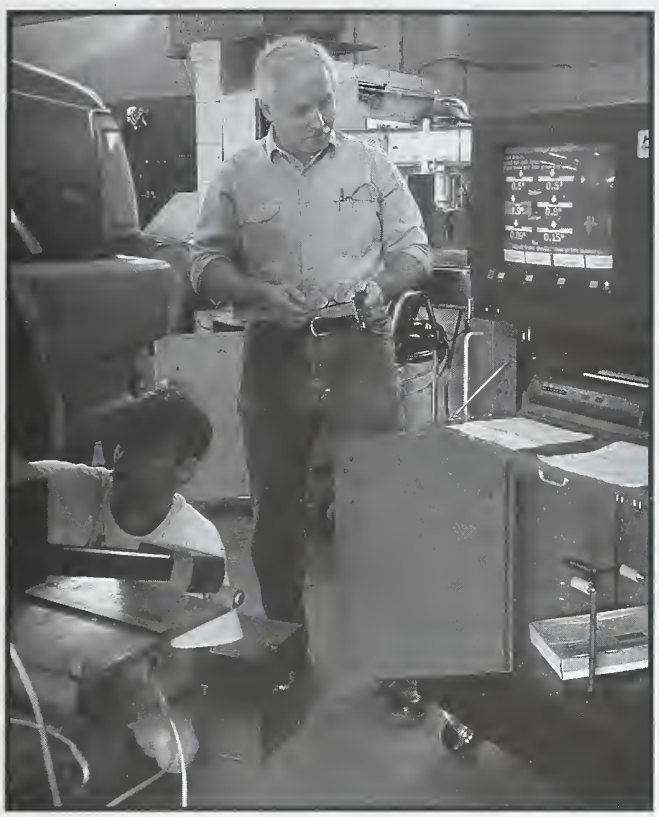
VI-WINTER
ELECTIVE
NUR 203

VII-SPRING
NUR 204
HUMANITIES/
FINE ARTS ELECTIVE

Automotive Technology

Automotive Technology is designed to meet the need for preparing highly trained technicians to service and repair automobiles and light trucks equipped with highly technical electrical, electronics, and emission control systems. Emphasis is placed on the operation and servicing of the power train components, electrical systems, fuel systems, chassis and suspension and emission controls of gasoline and diesel engine vehicles. Upon completion of this curriculum, the person should have the theoretical knowledge and background to understand the systems of the newer model automobiles and should be prepared to work as a technician servicing automobiles and light duty trucks.

MAJOR COURSES		Credit
AUT 101	Engine Systems Operation	2
AUT 102	Heating & Air Conditioning Diagnosis & Repair	4
AUT 103	Basic Automotive Electronics	3
AUT 104	Braking Systems	4
AUT 105	Suspension & Steering Systems	6
AUT 106	Electrical Fundamentals & Engine Electrical Systems	5
AUT 107	Engine Performance I	6
AUT 108	Chassis Electrical Systems	6
AUT 109	Engine Performance II	5
AUT 110	Antilock Braking Systems	3
AUT 111	Wheel Alignment	2
AUT 201	Manual Drive Train and Axles	7
AUT 202	Automatic Transmissions/Transaxles	6
AUT 203	Engine & Chassis Electrical Systems Application	6
AUT 204	Engine Diagnosis, Repair, & Rebuilding	6



AUT	205	Automotive Climate Control Systems Diagnosis & Repair	4
AUT	206	Advanced Engine Performance Applications	5
			80

RELATED COURSES

MAT	121	Technical Mathematics	5
CAS	201	Microcomputers for Industry	3
PHY	100	Introductory Physics	5
			13

GENERAL EDUCATION

ENG	151	English Composition I	5
ENG	114	Oral Communications	3
___	___	Humanities/Fine Arts Elective	5
PSY	150	Introduction to Psychology	5
			18

ELECTIVES

___	___	Elective	3
			3

WORK EXPERIENCE

COE	101	Cooperative Work Experience	(1)
COE	102	Cooperative Work Experience	(1)
COE	103	Cooperative Work Experience	(1)
			(3)

TOTAL CREDITS **114**

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the Co-Op Director and department chairperson.

AUTOMOTIVE TECHNOLOGY

The seven-quarter sequence of courses recommended for the full-time student is:

I-FALL
AUT 101
AUT 102
AUT 103
AUT 104
ENG 114

II-WINTER
AUT 105
AUT 106
PHY 150

III-SPRING
AUT 107
AUT 108
ENG 151

IV-SUMMER
AUT 109
AUT 110
CAS 201
HUMANITIES/
FINE ARTS ELECTIVE
AUT 111

V-FALL
AUT 201
AUT 202
MAT 121

VI-WINTER
AUT 203
AUT 204
PHY 100

VII-SPRING
AUT 205
AUT 206
ELECTIVE

Basic Law Enforcement Training

The Basic Law Enforcement Training curriculum Certification Examination mandated by the North Carolina Criminal Justice Education and Training Standard Commission and/or it prepares individuals to take the Justice Officers Basic Training Certification Examination mandated by the North Carolina Sheriffs' Education and Training Standards Commission. Successful completion of the curriculum certificate program requires that the student satisfy the minimum requirements for certification by the Criminal Justice Commission and/or the Sheriff's Commission. The student satisfactorily completing this program should possess at least the minimum degree of general attributes, knowledge, and skills to function as an inexperienced law enforcement officer.

Job opportunities are available with state, county, and municipal governments in North Carolina. In addition, knowledge, skills, and abilities acquired in this course of study qualify one for job opportunities with private enterprises in such areas as industrial, retail, and private security.

MAJOR COURSE			**Credit**
CJC	130	Law Enforcement Training (Clock Hours 550)	28

TOTAL CREDITS **28**

Business Administration

The Business Administration curriculum provides a broad education in business principles and practices. This curriculum is designed to prepare individuals for entry-level business positions.

In this program of study, the student will gain knowledge of basic business principles and concepts through a study of management functions, marketing, accounting and finance, economics, human resources development, and legal and ethical aspects of business. Skills related to the applications of these business principles are developed through study of communications, mathematics, computer applications, and decision-making principles.

Additional training through practice in classroom activities which develop team-building skills will prepare graduates to function as contributing members of management teams. Graduates may find employment in large and small businesses, not-for-profit service organizations, government agencies, and financial institutions.

MAJOR COURSES		Credit
ACC 120	Accounting I	5
ACC 121	Accounting II	5
ACC 122	Accounting III	5
ACC 128	Computerized Accounting	3
ACC 129	Taxes I	4
ACC 230	Taxes II	4
BUS 115	Business Law	5
BUS 123	Business Finance I	4
BUS 124	Business Finance II	4
BUS 235	Business Management	3
ECO 102	Economics I	3
ECO 200	Managerial Economics	5
MKT 232	Sales Development	3
MKT 239	Marketing	5
		58

RELATED COURSES		
BUS 135	Advanced Business Applications	4
CAS 101	Computer Familiarization	3
CAS 109	Database Processing	4
CAS 125	Microcomputer Word Processing	4
CAS 130	Spreadsheet Application I	2
CAS 211	Spreadsheet Application II	2
ECO 104	Economics II	3
ENG 155	Technical and Business Writing	5
OSC 105	Keyboarding	4
OSC 118	Document Production	4
		35

GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 114	Oral Communications	3
MAT 121	Technical Mathematics	5
PSY 150	Introduction to Psychology	5
___ ___	Humanities/Fine Arts Elective	5
		23

TOTAL CREDITS **116**

BUSINESS ADMINISTRATION

The six-quarter sequence of courses recommended for the full-time student is:

I-FALL
BUS 115
CAS 101
ENG 114
MAT 121
OSC 105

II-WINTER
ACC 120
BUS 135
OSC 118
ELECTIVE

III-SPRING
ACC 121
CAS 125
ENG 151
PSY 150

IV-FALL
ACC 122
ACC 128
ACC 129
CAS 109
ECO 102
ENG 155

V-WINTER
ACC 230
BUS 123
CAS 130
ECO 104
MKT 239

VI-SPRING
BUS 124
BUS 235
CAS 211
ECO 200
MKT 232

Chemical Technology

The Chemical Technology curriculum prepares individuals as research assistants to chemists in the laboratory or as planning and production assistants to chemical engineers in actual industrial production.

Chemical technicians perform quantitative and qualitative chemical analyses of processes involved in research, production or monitoring situations. They test samples of raw materials to determine that they are within specification limits required, analyze samples of finished products to determine quality and prepare laboratory test reports, check chemical analyses with specifications and operate electronic laboratory equipment.

MAJOR COURSES		Credit
CHM 114	Basic Chemical Concepts I	8
CHM 115	Basic Chemical Concepts II	8
CHM 116	Descriptive Chemistry	4
CHM 130	Organic Chemistry I	3
CHM 140	Unit Processes	8
CHM 150	Industrial Operations	5
CHM 231	Organic Chemistry II	6
CHM 232	Organic Chemistry III	6
CHM 233	Biochemical Concepts	4
CHM 243	Industrial Analysis I (Qualitative)	4
CHM 244	Industrial Analysis II (Quantitative)	5
CHM 245	Industrial Analysis III (Quantitative)	6
		67

RELATED COURSES		
BIO 150	General Biology I	6
BIO 252	Microbiology	6
MAT 121	Technical Mathematics I	5
MAT 122	Technical Mathematics II	5
PHY 100	Introductory Physics	5
PHY 103	Physics: Electricity	4
PHY 105	Physics: Heat and Fluids	4
SAF 120	First Aid	3
		38

GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 114	Oral Communications	3
PSY 150	Introduction to Psychology	5
___ ___	Humanities/Fine Arts Elective	5
		18

ELECTIVES		
___ ___	Elective	3
		3

WORK EXPERIENCE		
COE 101	Cooperative Work Experience	(1)
COE 102	Cooperative Work Experience	(1)
COE 103	Cooperative Work Experience	(1)
		(3)

TOTAL CREDITS	126

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the Co-op director and department chairperson.

TRANSFER
Graduates (AAS) of the Chemical Technology program, who are otherwise accepted by the University of North Carolina at Wilmington (UNCW) for transfer, will be granted 20 semester hours chemistry credit toward a BA or BS chemistry degree. Details and other information are available in the CFCC Admissions and Counseling Office.

CHEMICAL TECHNOLOGY
The seven-quarter sequence of courses recommended for the full-time student is:

I-FALL
CHM 114
MAT 121
PSY 150

II-WINTER
CHM 115
ENG 151
MAT 122

III-SPRING
CHM 116
CHM 130
PHY 100
SAF 120

IV-SUMMER
CHM 140
CHM 150
PHY 103
ELECTIVE

V-FALL
CHM 231
CHM 243
ENG 114
PHY 105

VI-WINTER
BIO 150
CHM 232
CHM 244

VII-SPRING
BIO 252
CHM 233
CHM 245
HUMANITIES/FINE ARTS ELECTIVE

Computer Engineering Technology

This program is intended to provide the skills required to install, service and maintain computers, microprocessors and computer controlled equipment and computer peripheral devices.

The curriculum provides training in both the hardware and software areas of the computer field.

A sequence of introductory hardware courses provides the student with a strong background in physics, technical mathematics, electricity, electronics, and digital logic circuits and concepts. Advanced course work provides a detail study of the logic of the central processing unit, the operation of integrated circuits in the central processing unit, the operation and use of

integrated circuit memory devices and the interfacing of the central processing unit to memory devices. Additional studies cover interfacing the central processing unit to external devices using both serial and parallel data transfer, the operation of large scale integration programmable interface units and their interfacing with the central processing unit, and the operation of computer peripheral devices such as video displays, printers, floppy disk storage systems, magnetic tape units, key boards and the techniques of converting signal between the analog and digital forms.

The programming course work provides a sequence of study stressing good program design techniques, structured programming and program documentation. Rather than being familiar with a large number of programming languages, the student is expected to learn well, a highly structured language, such as C, and an assembly language. The importance of assembly language to the understanding of the operation of the central processing unit and the related computer units is stressed. Computer operating system concepts are discussed to provide a unified view of the hardware and software aspects of the computer system.

MAJOR COURSES		Credit
ELC 107	Electricity I	6
ELC 108	Electricity I	5
ELN 102	Electronic Fabrication Techniques	1
ELN 141	Personal Computer Systems	5
ELN 208	Service & Maintenance of PC Hardware	5
ELN 121	Digital Electronics I	5
ELN 122	Digital Electronics II	3
ELN 248	Introduction to the Digital Computer	5
ELN 244	Computer Project (Software)	2
CSC 249	Introduction to Operating Systems	3
ELN 221	Microprocessors I	4
ELN 222	Microprocessors II	4
ELN 263	Computer Integrated Manufacturing	4
ELN 260	Data Communications	2
ELN 261	Local Area Networks I	4
ELN 262	Local Area Networks II	4
ELN 259	System Performance and Security	5
		67

RELATED COURSES		
DFT 100	Technical Drafting	2
CSC 250	C Language Programming I	3
CSC 251	C Language Programming II	3
CAS 106	Computer Applications	3
CHM 101	Introduction to Chemistry	5
MAT 121	Technical Mathematics	5
MAT 122	Technical Mathematics	5
MAT 123	Technical Mathematics	5
PHY 100	Introductory Physics	5
		36

GENERAL EDUCATION		
ENG 151	English Composition I	5
SOC 150	Introduction to Sociology	5
ENG 114	Oral Communication	3
____ ___	Humanities/Fine Arts Elective	5
		18

ELECTIVES		
____ ___	Elective	3
		3

WORK EXPERIENCE		
COE 101	Cooperative Work Experience	(1)
COE 102	Cooperative work Experience	(1)
COE 103	Cooperative work Experience	(1)
		(3)

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the co-op director and department chairperson.

TOTAL CREDITS **126**

COMPUTER ENGINEERING TECHNOLOGY

The seven-quarter sequence of courses recommended for the full-time student is:

I-FALL
ELC 107
ELN 102
CAS 106
MAT 121

II-WINTER
ELC 108
CSC 250
ENG 151
MAT 122

III-SPRING
ELN 141
CSC 251
PHY 100
MAT 123

IV-SUMMER
DFT 100
ELN 208
ELN 121
CHM 101
ELECTIVE

V-FALL
ELN 261
ELN 122
CSC 249
ELN 260
SOC 150

VI-WINTER
ELN 248
ELN 221
ELN 244
ELN 262
ENG 114

VII-SPRING
ELN 222
ELN 259
ELN 263
HUMANITIES/FINE ARTS ELECTIVE

Criminal Justice - Protective Services Technology

The Criminal Justice Technology curriculum is designed so that it may be a multifaceted program of study. It may consist of study options in corrections, law enforcement and security services.

The curriculum is designed with a core of courses to afford one the opportunity to acquire basic knowledge, skills and attitudes in the generally accepted subject areas associated with a two-year study of correctional services, law enforcement services and security services. It includes subjects such as interpersonal communications, law, psychology and sociology.

In addition to core subjects, the correctional services option provides an opportunity to study other generally accepted subjects indigenous to a two-year correctional services program such as confinement facility administration, correctional law, counseling, probation-parole services and rehabilitation options. Similarly, the law enforcement option provides an opportunity to study other generally accepted subjects included in a two-year law enforcement services program such as criminal behavior, criminal investigation, patrol operation, traffic management, and other aspects of law enforcement administration and operations. The security services option provides an opportunity to study other generally accepted subjects related to a two-year security services program such as accident prevention and safety management, common carrier protection, fire prevention, private security, industrial security, retail security, security systems and surveillance.

Job opportunities are available with federal, state, county and municipal governments. In addition, knowledge, skills and attitudes acquired in this course of study qualify one for job opportunities with private enterprise in such areas as industrial, retail and private security.

COURSE AND HOUR REQUIREMENTS-CRIMINAL JUSTICE-PROTECTIVE SERVICES TECHNOLOGY GENERAL OPTION

MAJOR COURSES		**Credit**
CJC 102	Introduction to Criminology	5
CJC 105	Firearms and Ballistics	4
CJC 150	Introduction to Criminal Justice	5
CJC 111	Introduction to Law Enforcement	5
CJC 113	Introduction to Courts	5
CJC 115	Criminal Law	5
CJC 160	Introductions to Corrections	5
CJC 206	Juvenile Justice System	5
CJC 220	Criminal Justice Organization & Management	5
CJC 250	Contemporary Issues in Criminal Justice	5
PHO 150	Introduction to Photography	3
POL 250	American State and Local Government	5
LEX 205	Constitutional Law	5
	(Take 5 QHC from the following)	5

CRIMINAL JUSTICE ELECTIVES

CJC 108	Research and Planning in Criminal Justice	5
CJC 126	Ethics and Community Relations	5
CJC 140	Fingerprint Identification	5
CJC 141	Handwriting Identification	5
CJC 205	Scientific Evidence	5
CJC 208	Arson Investigation	5
CJC 225	Security and Crime Prevention	5
CJC 245	Security Management	5
		67

RELATED COURSES

OSC 105	Keyboarding	4
MAT 150	College Mathematics I	5
SOC 150	Introduction to Sociology	5
SOC 260	Sociology of Deviant Behavior	3
SOC 250	Sociology of the Family	5
BIO 150	General Biology I	6
		28

GENERAL EDUCATION

ENG 151	English Composition I	5
ENG 152	English Composition II	5
SPH 150	Introduction to Speech	5
— —	HUMANITIES / FINE ARTS ELECTIVE	5
		20

ELECTIVES

— —	ELECTIVE	5
		5

TOTAL CREDITS **120**

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the co-op director and department chairperson.

COURSE AND HOUR REQUIREMENTS-CRIMINAL JUSTICE-PROTECTIVE SERVICES TECHNOLOGY CORRECTIONS OPTION

MAJOR COURSES		**Credit**
CJC 102	Introduction to Criminology	5
CJC 105	Firearms and Ballistics	4
CJC 150	Introduction to Criminal Justice	5
CJC 111	Introduction to Law Enforcement	5
CJC 113	Introduction to Courts	5
CJC 115	Criminal Law	5
CJC 160	Introductions to Corrections	5
CJC 220	Criminal Justice Organization & Management	5
CJC 250	Contemporary Issues in Criminal Justice	5
PHO 150	Introduction to Photography	3
POL 250	American State and Local Government	5
LEX 205	Constitutional Law	5

(Take10 QHC from the following)		10
CRIMINAL JUSTICE ELECTIVES		
CJC 108	Research and Planning in Criminal Justice	5
CJC 126	Ethics and Community Relations	5
CJC 140	Fingerprint Identification	5
CJC 141	Handwriting Identification	5
CJC 205	Scientific Evidence	5
CJC 206	Juvenile Justice System	5
CJC 208	Arson Investigation	5
CJC 225	Security and Crime Prevention	5
CJC 245	Security Management	5
		67
RELATED COURSES		
OSC 105	Keyboarding	4
MAT 150	College Mathematics I	5
SOC 150	Introduction to Sociology	5
SOC 260	Sociology of Deviant Behavior	3
SOC 265	Sociology of Juvenile Delinquency	3
SOC 250	Sociology of the Family	5
BIO 150	General Biology I	6
		31
GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 152	English Composition II	5
SPH 150	Introduction to Speech	5
— —	HUMANITIES / FINE ARTS ELECTIVE	5
		20
ELECTIVES		
— —	ELECTIVE	3
		3
TOTAL CREDITS		**121**

CO-OP OPTION: Qualified students may elect to take co-operative education in place of free electives provided they acquire approval from the co-op director and department chairperson.

COURSE AND HOUR REQUIREMENTS-CRIMINAL JUSTICE-PROTECTIVE SERVICES TECHNOLOGY LAW ENFORCEMENT OPTION

MAJOR COURSES		**Credit**
CJC 102	Introduction to Criminology	5
CJC 103	Introduction to Criminal Investigation	5
CJC 105	Firearms and Ballistics	4
CJC 150	Introduction to Criminal Justice	5
CJC 111	Introduction to Law Enforcement	5
CJC 113	Introduction to Courts	5
CJC 115	Criminal Law	5
CJC 160	Introduction to Corrections	5
CJC 211	Introduction to Criminalistics	5
CJC 222	Crime Scene Processing	5
CJC 250	Contemporary Issues in Criminal Justice	5
PHO 150	Introduction to Photography	3
POL 250	American State and Local Government	5

(Take 5 QHC from the following)		5
CRIMINAL JUSTICE ELECTIVES		
CJC 108	Research and Planning in Criminal Justice	5
CJC 126	Ethics and Community Relations	5
CJC 140	Fingerprint Identification	5
CJC 141	Handwriting Identification	5
CJC 205	Scientific Evidence	5
CJC 208	Arson Investigation	5
CJC 225	Security and Crime Prevention	5
CJC 245	Security Management	5
		67
RELATED COURSES		
OSC 105	Keyboarding	4
MAT 150	College Mathematics I	5
SOC 150	Introduction to Sociology	5
SOC 260	Sociology of Deviant Behavior	3
SOC 250	Sociology for the Family	5
BIO 150	General Biology I	6
		28
GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 152	English Composition II	5
SPH 150	Introduction to Speech	5
— —	HUMANITIES / FINE ARTS ELECTIVE	5
		20
ELECTIVES		
— —	ELECTIVE	5
		5
TOTAL CREDITS		**120**

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the co-op director and department chairperson.

CRIMINAL JUSTICE-PROTECTIVE SERVICES TECHNOLOGY

The seven-quarter sequence of courses recommended for the full-time student is:

GENERAL CRIMINAL JUSTICE OPTION

I- FALL
CJC 150
ENG 151
MAT 150
OSC 105

II- WINTER
CJC 111
CJC 115
ENG 152

III-SPRING
CJC 160
CJC 250
POL 250
SPH 150

IV-SUMMER
CJC 113
CJC 102
SOC 150
PHO 150

V-FALL
SOC 260
CJC 220
BIO 150

VI-WINTER
SOC 250
HUMANITIES/FINE ARTS ELECTIVE
CJC 105
ELECTIVE

VII-SPRING
CJC 206
LEX 205
CRIMINAL JUSTICE ELECTIVE

LAW ENFORCEMENT OPTION

I- FALL
CJC 150
ENG 151
MAT 150
OSC 105

II- WINTER
CJC 111
CJC 115
ENG 152

III- SPRING
CJC 160
CJC 250
POL 250
SPH 150

IV-SUMMER
CJC 113
CJC 102
SOC 150
PHO 150

V-FALL
CJC 211
SOC 250
HUMANITIES/FINE ARTS ELECTIVE

VI-WINTER
CJC 103
BIO 150
SOC 260
CJC 105

VII-SPRING
CRIMINAL JUSTICE ELECTIVE
CJC 222
ELECTIVE

CORRECTIONS OPTION

I-FALL
CJC 150
ENG 151
MAT 150
OSC 105

II-WINTER
CJC 111
CJC 115
ENG 152

III-SPRING
CJC 160
CJC 250
POL 250
SPH 150

IV-SUMMER
CJC 113
CJC 102
SOC 150
PHO 150

V-FALL
CJC 105
SOC 260
BIO 150

VI-WINTER
SOC 265
CRIMINAL JUSTICE ELECTIVE
CRIMINAL JUSTICE ELECTIVE

VII-SPRING
CJC 220
SOC 250
LEX 205
ELECTIVE

Drafting and Design Engineering Technology

The drafting and design engineering technology curriculum prepares technicians for drafting and/or designing mechanical parts, mechanisms and mechanical systems.

Emphasis is placed on developing the student's ability to think and plan as well as on the development of drafting and design skills. Computer Aided Drafting (CAD) and conventional equipment will be used to produce drawings such as sectional views, subassemblies and major components of machinery and mechanical systems.

Coursework includes the study of technical drafting and design, materials, applied mechanics, mechanical systems, manufacturing methods, manufacturing processes, applied physics, technical mathematics, descriptive geometry, computer applications and written and oral communications.

Drafting and design technicians are employed in many types of manufacturing, fabrication, research and development and service industries.

MAJOR COURSES		Credit
DDF 201	Design Drafting I	8
DDF 202	Design Drafting II	8
DDF 203	Design Drafting III	8
DFT 101	Technical Drafting I	6
DFT 102	Technical Drafting II	2
DFT 103	Technical Drafting III	2
DFT 151	Computer Aided Drafting I	4
DFT 152	Computer Aided Drafting II	4
DFT 200	Geometric Tolerancing	4
HYD 235	Hydraulics and Pneumatics	4
MEC 121	Industrial Methods I	1
MEC 122	Industrial Methods II	1
MEC 123	Introduction to CAD-CAM	2
MEC 205	Strength of Materials	4
MEC 209	Introduction to Metallurgy	4
MEC 216	Industrial Materials	5
		67
RELATED COURSES		
ATR 201	Introduction to Robotics	4
CAS 106	Computer Applications	3
MAT 121	Technical Mathematics	5
MAT 122	Technical Mathematics	5
MAT 123	Technical Mathematics	5
PHY 100	Introductory Physics	5
PHY 103	Physics: Electricity	4
PHY 106	Applied Mechanics	4
		35
GENERAL EDUCATION		
ART 152	Drawing Fundamentals	5
ENG 114	Oral Communications	3
ENG 151	English Composition I	5
SOC 150	Introduction to Sociology	5
		18
WORK EXPERIENCE		
COE 101	Cooperative Work Experience	(1)
COE 102	Cooperative Work Experience	(1)
COE 103	Cooperative Work Experience	(1)
		(3)
TOTAL CREDITS		**120**

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the co-op director and department chairperson.

DRAFTING AND DESIGN ENGINEERING TECHNOLOGY

The six-quarter sequence of courses recommended for the full-time student is:

I-FALL
CAS 106
DFT 101
ENG 114
MAT 121
MEC 121

II-WINTER
ART 152
DFT 102
DFT 151
ENG 151
MAT 122
MEC 122

III-SPRING
DFT 103
DFT 152
MAT 123
MEC 123
PHY 100

IV-SUMMER
DDF 201
DFT 200
HYD 235
PHY 103

V-FALL
ATR 201
DDF 202
MEC 209
PHY 106

VI-WINTER
DDF 203
MEC 205
MEC 216
SOC 150

Early Childhood Associate

The Early Childhood Associate curriculum is designed to prepare individuals to work with children in learning environments from infancy through middle childhood. The program of study includes the subjects of child growth and development, physical and nutritional needs of children, care and guidance of children and communication with children and their parents. Students learn to foster the cognitive/language, physical/motor, and social/emotional development of children. The program of study combines theories and principles with opportunities for supervised practice.

Graduates are prepared to plan and implement develop mentally appropriate programs in early childhood settings. Employment opportunities are available in child development and child care programs, preschools, public and private schools, recreational centers, day care centers, kindergartens, some Head Start programs, and programs for children with special needs.

MAJOR COURSES		Credit
+EDU 110	Seminar Practicum: Preschool Environment	1
+EDU 117	Child Growth & Development I	3
+EDU 118	Child Growth & Development II	3
+EDU 119	Child Growth & Development III	3
+EDU 122	Child Health, Safety, & Nutrition	3

+EDU	125	Creative Activities in Early Childhood	6
+EDU	215	Behavioral Management	5
+EDU	216	Communication Activities in Early Childhood	6
EDU	217	Exploration Activities in Early Childhood	6
+EDU	225	Working with Children with Special Needs	3
EDU	220	Seminar Practicum: Special Needs Environment	1
+EDU	223	Working with the Child's Family Community	3
*EDU	101	Introduction to Early Childhood Education: Child Credential I	3
		or	
EDU	106	Early Childhood Overview	3
*EDU	102	Introduction to Early Childhood Education: Child Care Credential II	3
		or	
EDU	107	Early Childhood Principles and Practices	3
+EDU	211	Infant/Toddler Development and Activities	3
EDU	231	Early Childhood Curriculum Planning	5
+EDU	232	Child Care Administration	3
			60

RELATED COURSES

+MAT	121	Technical Mathematics	5
+SAF	119	First Aid and Adult & Infant/Child CPR	3
+SOC	250	Sociology of the Family	5
		and	

(Ten (10) hours of related subjects should be selected from the following:

ART	151	Art History and Appreciation	5
BIO	101	Human Anatomy and Physiology I	5
HIS	250	American History I	5
HIS	251	American History II	5
MUS	150	Survey of Music Literature	5
SOC	270	Modern Social Problems	5
SWK	150	Introduction to Social Work	5
			23

GENERAL EDUCATION

+ENG	151	English Composition I	5
ENG	152	English Composition II	5
SOC	150	Introduction to Sociology	5
ENG	114	Oral Communications	3
___	___	Humanities/Fine Arts Elective	5
			23

WORK EXPERIENCE

EDU	110	Seminar Practicum: Preschool Environment	1
EDU	220	Seminar Practicum: Special Needs Environment	1
			2

ELECTIVES

___	___	Elective	3
			3

TOTAL CREDITS **111**

CREDENTIAL OPTION: Courses designated with this symbol*. 6 Hours.

DIPLOMA OPTION: Courses designated with these symbols *+. 65 Hours.

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the Co-Op Director and department chairperson.

EARLY CHILDHOOD ASSOCIATE

The six-quarter sequence of courses recommended for the full-time student is:

I- FALL
EDU 117
EDU 101 or
EDU 106
ENG 151
ENG 114
MAT 101

II- WINTER
EDU 118
EDU 102 or
EDU 107
EDU 110
ENG 152
SOC 150

III-SPRING
SOC 250
EDU 119
EDU 122
EDU 125
HUMANITES/
FINE ARTS
ELECTIVE

IV- SUMMER
EDU 217
EDU 215
EDU 211
EDU 225
RELATED ELECTIVE

V- FALL
EDU 216
EDU 223
EDU 220
EDU 231
SAF 119

VI-WINTER
EDU 232
FREE ELECTIVE
RELATED ELECTIVE

Electronics Engineering Technology

The Electronics curriculum provides a basic background in electronic related theory, with practical applications of electronics for business and industry. Courses are designed to develop competent electronics technicians who may work as assistants to engineers or liaisons between engineers and skilled craftsperson.

The electronics technician will start in one or more of the following areas: research, design, development, production, maintenance or sales. The graduate may begin as an electronics technician, an engineering aide, laboratory technician, supervisor or equipment specialist.

MAJOR COURSES		Credit
ELC 107	Electricity I	6
ELC 108	Electricity I	5
ELC 109	Electricity III	5
ELN 102	Electronic Fabrication Techniques	1
ELN 106	Electronics I	5
ELN 107	Electronics II	5
ELN 108	Electronics III	5
ELN 121	Digital Electronics I	5
ELN 122	Digital Electronics II	3
ELN 202	Communication Electronics	4
ELN 205	Analytic Electronic Troubleshooting	1
ELN 231	Electronics in Industry	4
ELN 236	Industrial Field Trips	1
ELN 221	Microprocessors I	4
ELN 270	Data Communications and Local area Networks	4
ELN 272	Programmable Logic Controllers	4
ELN 274	Optical Electronics	2
ELN 273	Computer Integrated Manufacturing and Robotics	4
ELN 271	Electronics Project	1
		69

RELATED COURSES		
DFT 100	Technical Drafting	2
CSC 250	C Language Programming I	3
CSC 251	C Language Programming II	3
MAT 121	Technical Mathematics	5
MAT 122	Technical Mathematics	5
MAT 123	Technical Mathematics	5
PHY 100	Introductory Physics	5
CHM 101	Introduction to Chemistry	5
CAS 106	Computer Applications	3
MEC 123	Introduction to CAD/CAM	2
		38

GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 114	Oral Communication	3
SOC 150	Introduction to Sociology	5
____ ___	Humanities/Fine Arts Elective	5
		18

ELECTIVES		
____ ___	Elective	3
		3

WORK EXPERIENCE		
COE 101	Cooperative Work Experience	(1)
COE 102	Cooperative Work Experience	(1)
COE 103	Cooperative work Experience	(1)
		(3)

TOTAL CREDITS **128**

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the co-op director and department chairperson.

ELECTRONICS ENGINEERING TECHNOLOGY

The seven-quarter sequence of courses recommended for the full-time student is:

I-FALL
ELC 107
ELN 102
CAS 106
MAT 121

II-WINTER
ELC 108
ELN 106
ENG 151
MAT 122

III-SPRING
ELC 109
ELN 107
PHY 100
MAT 123

IV-SUMMER
DFT 100
ELN 108
ELN 121
CHM 101
ELECTIVE

V-FALL
ELN 122
ELN 202
ELN 236
ELN 274
CSC 250
SOC 150

VI-WINTER
ELN 231
ELN 221
ELN 272
CSC 251
ENG 114

VII-SPRING
ELN 273
ELN 270
ELN 205
MEC 123
ELN 271
HUMANITIES/
FINE ARTS ELECTIVE

Hotel and Restaurant Management

The Hotel and Restaurant Management curriculum prepares students to work as supervisory and management personnel in hotels, restaurants and clubs. Areas of study include front office management, accounting, sales promotion, food and beverage control, personnel management, food preparation and service. An internship program in the field may be offered to the student to acquire industry experience under the direction of a qualified manager and college supervisor.

The graduate has an opportunity for employment with hotels, clubs, restaurants, airlines, colleges, schools, convalescent homes, government services and hospitals.

MAJOR COURSES		Credit
HRM 101	Introduction to the Hospitality Industry	3
HRM 107	Organization and Administration	3
HRM 137	Food and Beverage Management	4
HRM 143	Basic Sanitation	3
HRM 133	Front Office Procedures	4
HRM 239	Housekeeping Management	3
HRM 120	Hospitality Industry Training	3
HRM 240	Hospitality Human Resources Management	3
HRM 245	Food and Beverage Service	4
HRM 222	Marketing of Hospitality Services	3
HRM 205	Hospitality Law	3
HRM 241	Food and Beverage Controls	4
HRM 243	Hospitality Purchasing Management	3
HRM 248	Hospitality Industry Computer Systems	4
HRM 246	Hospitality Management Problems	3
HRM 202	Convention Management and Service	3
___ ___	Technical Electives	6
		59

RELATED COURSES		
ACC 120	Accounting I	5
ACC 121	Accounting II	5
ACC 122	Accounting III	5
BUS 135	Advanced Business Applications	4
CAS 101	Computer Familiarization	3
OSC 105	Keyboarding	4
MKT 232	Sales Development	3
		29

GENERAL EDUCATION		
ENG 114	Oral Communications	3
ENG 151	English Composition I	5
MAT 121	Technical Mathematics	5
PSY 150	Introduction to Psychology	5
___ ___	Humanities/Fine Arts Elective	5
		23

WORK EXPERIENCE		
COE 101	Cooperative Work Experience or Second Technical Elective	(1)
COE 102	Cooperative Work Experience or Second Technical Elective	(1)
COE 103	Cooperative Work Experience or Second Technical Elective	(1) (3)

TOTAL CREDITS **114**

CO-OP OPTION: Qualified students may elect to take cooperative education in place of free electives provided they acquire approval from the co-op director and department chairperson.

RESTRICTED TECHNICAL ELECTIVES
Students must complete a minimum of 6 credit hours from the following technical electives.

HRM 102	Tourism and the Hospitality Industry	3
HRM 138	Food Production Principles	4
HRM 115	Hospitality Energy and Water Management	3
HRM 124	Managerial Accounting for the Hospitality Industry	4
HRM 203	Hospitality Industry Engineering Systems	3
HRM 224	Quality Control	3
HRM 223	Hotel/Motel Sales Promotion	3
HRM 109	Nutrition for Foodservice	3
HRM 201	Hotel/Motel Security Management	3

HOTEL AND RESTAURANT MANAGEMENT
The six-quarter sequence of courses recommended for the full-time student is:

I-FALL
MAT 121
CAS 101
ENG 114
HRM 101
HRM 107
OSC 105

II-WINTER
ACC 120
BUS 135
HRM 143
HRM 239
ENG 151

III-SPRING
ACC 121
HRM 120
HRM 133
HRM 137
PSY 150

IV-FALL
ACC 122
HRM 241
HRM 243
CO-OP OR FREE ELECTIVE
TECHNICAL ELECTIVE

V-WINTER
HRM 205
HRM 222
HRM 240
HRM 245
TECHNICAL ELECTIVE

VI-SPRING
HRM 202
HRM 246
HRM 248
MKT 232
HUMANITIES/FINE ARTS ELECTIVE

There is no recommended sequence of summer courses. Students may wish to choose from available offerings to lessen their quarterly load, make up low grades or catch up due to remedial courses or out of sequence.

Interior Design

The Interior Design Program prepares students for a variety of job opportunities in the fields of both residential and nonresidential design. The course of study includes principles and elements of design, drafting, visual communications techniques, the history of styles, currently manufactured products, color theory, furniture design and construction, floor coverings, fabrics, window treatments, wall coverings, paint, accessories, and lighting. Students have the opportunity to cover the elements of interior design and to demonstrate their abilities in interior coordination.

Graduates of this program may qualify for various positions with the following types of employers: interior design studios, furniture manufacturers, architects, furniture design studios, photography studios, and any type of business dealing with interior furnishings.

Specific curriculum information will be provided following approval by the North Carolina Community College System.

Instrumentation Technology

The Instrumentation Technology curriculum provides a program of study to develop knowledge of measuring and controlling devices and to develop the technical skills involved in the application of instrument control to processes, systems, and operations of modern industry. The instrumentation technician is a key person in keeping a processing plant operating. This individual is responsible for both production and production control and must deal with variables that affect manufacturing processes such as temperature, flow, level, humidity, density and viscosity. In many plants when a piece of equipment breaks down, employees are laid off until the instrumentation person can repair the equipment and production is resumed. This person's knowledge of mechanics, electronics, pneumatics and the manufacturing process is the key factor in how quickly a machine or plant may again resume operation.

The instrumentation technician may select, install, calibrate, check out and maintain sensing, telemetering, and recording instrumentation and circuitry. Other functions may include devising, setting up and operating instrumentation equipment involved in testing mechanical, structural or electrical equipment. The graduate may work as an instrumentation technician, engineering aide or associate, service specialist, laboratory technician or instrument field service technician.

MAJOR COURSES		**Credit**
ELC 107	Electricity I	6
ELC 108	Electricity I	5
ELC 109	Electricity III	5
ELN 102	Electronic Fabrication Techniques	1
ELN 106	Electronics I	5
ELN 107	Electronics II	5
ELN 108	Electronics III	5
ELN 121	Digital Electronics I	5
ELN 122	Digital Electronics II	3
ELN 223	Microprocessors Industrial Control Applications	4
ELN 224	Measurement and Control I	4
ELN 225	Measurement and Control II	5
ELN 226	Measurement and Control III	5
ELN 227	Industrial Motor Control	3
ELN 236	Industrial Field Trips	1
ELN 221	Microprocessors I	4
CSC 250	C Language Programming I	3
		69
RELATED COURSES		
CAS 106	Computer Applications	3
DFT 100	Technical Drafting	2
MAT 121	Technical Mathematics	5
MAT 122	Technical Mathematics II	5
MAT 123	Technical Mathematics III	5
PHY 100	Introductory Physics	5
PHY 104	Physics: Light and Sound	4
PHY 105	Physics: Heat and Fluids	4
CHM 101	Introduction to Chemistry	5
		38
GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 114	Oral Communication	3
SOC 150	Introduction to Sociology	5
____ ___	Humanities/Fine Arts Elective	5
		18
ELECTIVES		
____ ___	Elective	3
		3
WORK EXPERIENCE		
COE 101	Cooperative Work Experience	(1)
COE 102	Cooperative Work Experience	(1)
COE 103	Cooperative Work Experience	(1)
		(3)
TOTAL CREDITS		**128**

CO-OP OPTION: Qualified students may elect to take cooperative education in plant of free electives provided they acquire approval from the co-op director and department chairperson.

INSTRUMENTATION TECHNOLOGY
The seven-quarter sequence of courses recommended for the full-time student is:

I-FALL
ELN 102
ELC 107
CAS 106
MAT 121

II-WINTER
ELC 108
ELN 106
ENG 151
MAT 122

III-SPRING
ELN 107
ELC 109
PHY 100
MAT 123

IV-SUMMER
DFT 100
ELN 121
CHM 101
ELECTIVE

V-FALL
ELN 122
ELN 224
ELN 236
CSC 250
PHY 105
ELN 227

VI-WINTER
ELN 225
ELN 221
PHY 104
ENG 114

VII-SPRING
ELN 226
ELN 223
SOC 150
HUMANITIES/
FINE ARTS ELECTIVE

Machining Technology

The Machining Technology curriculum is a comprehensive program designed to develop skills in the theory and use of hand tools, power machinery, computerized equipment and sophisticated precision inspection instruments. Basic machining skills and introductory computer numerical control (CNC) courses are taught in the first half of the program. The second half of the program emphasizes the setup and operation of CNC machines, advanced CNC parts programming, CAD/CAM operations and quality assurance inspection skills.

Related coursework includes blueprint reading, applied mathematics through trigonometry, microcomputer skills and quality assurance theory.

Employment opportunities for machining technicians exist in manufacturing industries, public institutions, governmental agencies and in a wide range of specialty machining job shops.

MAJOR COURSES		Credit
MEC 103	Machining Technology I	9
MEC 104	Machining Technology II	8
MEC 105	Machining Technology III	8
MEC 106	Machining Technology IV	8
MEC 201	Machining Technology V	4
MEC 108	Turning Center Programming and Operation	3
MEC 107	Machining Center Programming and Operation	3
MEC 202	Advanced Turning Center Programming and Operation	2
MEC 206	Computer Aided Manufacturing I	5
MEC 203	Advanced Machining Center Programming and Operation	2
MEC 204	Jigs and Fixtures I	5
MEC 208	Computer Aided Manufacturing II	5
MEC 210	Jigs and Fixtures II	5
		67

RELATED COURSES		
BPR 104	Blueprint Reading for Manufacturing I	3
MAT 121	Technical Mathematics	5
BPR 105	Blueprint Reading for Manufacturing II	2
DFT 200	Geometric Tolerancing	4
MAT 104	Machinist Math I	5
MAT 105	Machinist Math II	5
MEC 209	Introduction to Metallurgy	4
DFT 207	Computer Aided Design	5
CAS 201	Microcomputers for Industry	3
ISC 102	Quality Control in Manufacturing	3
		39

GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 114	Oral Communications	3
SOC 150	Introduction to Sociology	5
___ ___	Humanities/Fine Arts Elective	5
		18

TOTAL CREDITS	124

MACHINING TECHNOLOGY
The seven-quarter sequence of courses recommended for the full-time student is:

I-FALL
BPR 104
ENG 114
MEC 103
HUMANITIES/FINE
ARTS ELECTIVE

II-WINTER
BPR 105
MAT 121
MEC 104
ISC 102

III-SPRING
DFT 200
MAT 104
MEC 105
MEC 107

IV-SUMMER
MAT 105
MEC 106
MEC 108
MEC 209

V-FALL
CAS 201
DFT 207
ENG 151
MEC 201
MEC 202

VI-WINTER
MEC 203
MEC 204
MEC 206

VII-SPRING
MEC 208
MEC 210
SOC 150

Manufacturing Engineering Technology

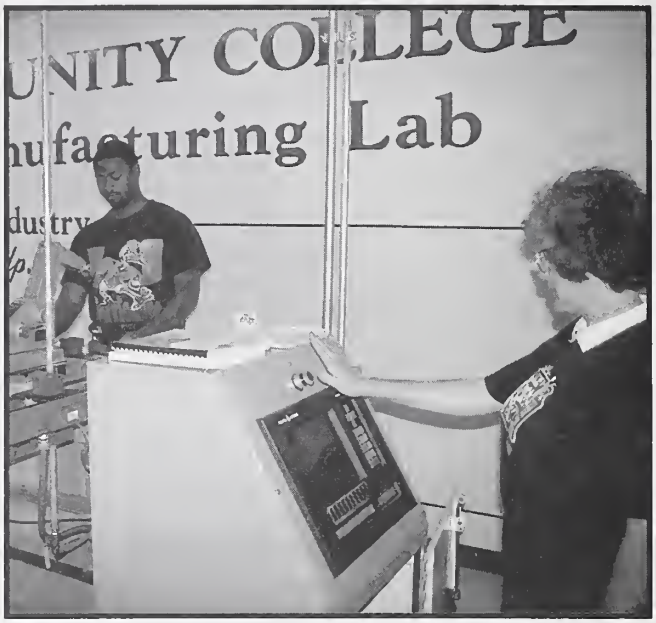
The primary objective of the Manufacturing Engineering Technology curriculum is the training of personnel to assist the engineer or small industry in planning, tooling, operating, servicing and supervising manufacturing operations. This curriculum provides a basic background of mechanical and related theory, the specific skills in the use of manufacturing and testing equipment. Students are given experiences in operating and servicing machines, accompanied by general education and management courses.

A graduate of this program may qualify for an entry position in one of several manufacturing functions: methods, analysis, production scheduling, quality control, materials testing, plant layout, time study, machine tooling, maintenance and equipment and instrument work.

MAJOR COURSES		Credit
ART 201	Introduction to Robotics	4
BPR 108	Industrial Blueprint Reading	3
CAS 106	Computer Applications	3
CSC 250	C Language Programming I	3
DFT 151	Computer Aided Drafting I	4
DFT 152	Computer Aided Drafting II	4
DFT 200	Geometric Tolerancing	4
DFT 206	Computer Aided Design/Plant Layout	4
ELM 208	Control Systems	4
HYD 235	Hydraulics and Pneumatics	4
ISC 101	Industrial Safety	3
ISC 102	Quality Control in Manufacturing	3
ISC 202	Quality Control and Statistics	4
ISC 204	Industrial Management	5
MEC 121	Industrial Methods I	1
MEC 122	Industrial Methods II	1
MEC 123	Introduction to CAD/CAM	2
MEC 207	Manufacturing Processes	3
MEC 220	Computer Integrated Manufacturing	4
WLD 101	Basic Welding	2
		65

RELATED COURSES		
CHM 101	Introduction to Chemistry	5
MAT 121	Technical Mathematics	5
MAT 122	Technical Mathematics	5
MAT 123	Technical Mathematics	5
MEC 209	Introduction to Metallurgy	4
MEC 216	Industrial Materials	5
PHY 100	Introductory Physics	5
PHY 103	Physics: Electricity	4
		38

GENERAL EDUCATION		
ART 152	Drawing Fundamentals	5
ENG 114	Oral Communications	3
ENG 151	English Composition I	5
SOC 150	Introduction to Sociology	5
		18



WORK EXPERIENCE		
COE 101	Cooperative Work Experience	(1)
COE 102	Cooperative Work Experience	(1)
COE 103	Cooperative Work Experience	(1)
		(3)

TOTAL CREDITS **121**

MANUFACTURING ENGINEERING TECHNOLOGY
The seven-quarter sequence of courses recommended for the full-time student is:

I-FALL
BPR 108
CAS 106
ENG 114
MAT 121
MEC 121

II-WINTER
ART 152
DFT 151
ENG 151
MAT 122
MEC 122

III-SPRING
DFT 152
MAT 123
MEC 123
PHY 100

IV-SUMMER
CHM 101
DFT 206
ISC 101
MEC 207

V-FALL
DFT 200
HYD 235
ISC 202
PHY 103
WLD 101

VI-WINTER
ATR 201
ELM 208
ISC 102
ISC 204
MEC 209

VII-SPRING
CSC 250
MEC 216
MEC 220
SOC 150

Marine Technology

The Marine Technology curriculum is designed to provide the science, English, mathematics, and practical skills essential for success in the area of marine scientific support. This curriculum provides the student with the opportunity to become proficient in the general knowledge and skills required of a scientific support technician through practical training aboard ship as well as in the classroom. The Marine Technology curriculum prepares individuals to use and maintain sophisticated equipment such as electronic navigation devices, physical and chemical measuring instruments, sampling devices, and data acquisition and reduction systems aboard ocean-going and other types of vessels.

Graduates of this program will be basically qualified to work in the following areas: data acquisition and reduction; environmental monitoring; geophysical exploration; general applied oceanography; field and laboratory biology; water analysis; water and wastewater treatment laboratory analysis; nuclear power plant environmental work; fishing gear construction and repair; small engine maintenance and repair; fishing; marine salvage; and other marine scientific activities. Employment opportunities are available with various state and federal agencies and with private businesses, and industry associated with marine science and research.

MAJOR COURSES		**Credit**
CHM 101	Introduction to Chemistry	5
CHM 109	Water Analysis I	2
CHM 224	Water Analysis II	3
ECL 113	Environmental Measurements	2
ELC 100	Marine Electricity 1	3
ELC 101	Marine Electricity 2	3
ELN 140	Introduction to Marine Electronics	4
GEL 101	Marine Geology	4
MSC 101	Navigation I	3
MSC 102	Navigation II	3
MSC 103	Ocean Survey	2
MSC 104	Ocean Survey	2
MSC 105	Ocean Survey	2
MSC 106	Ocean Survey	2
MSC 107	Ocean Survey	2
MSC 108	Oceanographic Instrumentation	3
MSC 109	Oceanography I	3
MSC 110	Oceanography II	3
MSC 111	Net Construction Methods	2
MSC 112	Biological Net Construction I	2
MSC 113	Biological Net Construction II	2
MSC 114	Biological Sampling Methods	2
MSC 117	Practical Experience I	1
MSC 118	Practical Experience II	1
MSC 119	Practical Photographic Applications	1
MSC 131	Marine Biology	3
MSC 132	Power Boat Operations and Seamanship	2
MSC 133	Marine Invertebrate Zoology	3
MSC 135	Aquarium Systems	2
MSC 141	Marine Projects	1
MSC 142	Marine Projects	1
MSC 143	Marine Projects	1
MSC 202	Data Processing I	2
MSC 205	Data Processing II	2
MSC 206	Estuarine Survey	5
MSC 213	Marine Vertebrate Zoology	4
PHO 110	Introduction to Photography	3
PME 101	Marine Engines I	2
PME 102	Marine Engines II	2
SAF 121	First Aid and Marine Safety	3
WLD 134	Marine Welding	2
		100

RELATED COURSES		
CAS 106	Computer Applications	3
DFT 117	Drafting and Blueprint Reading	3
MAT 121	Technical Mathematics	5
MAT 122	Technical Mathematics	5
MAT 123	Technical Mathematics	5
OSC 100	Basic Keyboarding	2
PHY 100	Introductory Physics	5
PHY 103	Physics: Electricity	4
		32

GENERAL EDUCATION		
ENG 114	Oral Communication	3
ENG 151	Composition 1	5
PSY 150	Introduction to Psychology	5
— —	HUMANITIES / FINE ARTS ELECTIVE	5
		18

ELECTIVES		
— —	ELECTIVE	0
		0

WORK EXPERIENCE		
COE 101	Cooperative Work Experience 1	(1)
COE 102	Cooperative Work Experience 2	(1)
COE 103	Cooperative Work Experience 3	(1)
		(3)

Total Credits **150**

MARINE TECHNOLOGY CURRICULUM
The eight-quarter sequence of courses recommended for the full-time student is:

I- FALL
MAT 121
MSC 103
MSC 109
MSC 111
MSC 131
MSC 132

II- WINTER
MAT 122
MSC 101
MSC 110
MSC 117
MSC 141
SAF 121
PHO 110

III- SPRING
CHM 101
ENG 151
MAT 123
MSC 104
MSC 118
MSC 135
OSC 100
WLD 134

IV- SUMMER
DFT 117
MSC 102
MSC 108
MSC 112
MSC 133
MSC 142
PME 101

V- FALL
CHM 109
ECL 113
MSC 105
MSC 113
PHY 100
PME 102
Humanities/
Fine Arts Elective

VI- WINTER
CAS 106
CHM 224
GEL 101
MSC 143
MSC 202
PSY 150

VII- SPRING
ELC 100
ENG 114
MSC 106
MSC 119
MSC 205
MSC 213
PHY 103

VIII- SUMMER
ELC 101
ELN 140
MSC 107
MSC 114
MSC 206

Paralegal Technology

The Paralegal Technology curriculum trains individuals in basic knowledge and applications of the law to work under the supervision of attorneys. The paralegal/legal assistant can support attorneys by performing routine legal tasks, and assisting with more complicated and difficult legal work. Training will include legal specialty courses such as legal research, real estate, litigation preparation, as well as general subjects such as English, oral communications, mathematics, and computer skills.

Graduates of the Paralegal Technology curriculum are trained to assist an attorney or group of attorneys in many areas of the law. A paralegal/legal assistant is not able to practice law, give legal advice or represent clients in court of law. However, paralegals/legal assistants can represent clients in some administrative hearings. Paralegal graduates will be able to assist in work on probate matters, conduct investigations, search public records, serve and file legal documents, perform library research, and provide office management. Employment opportunities and job descriptions vary greatly depending on whether a paralegal/legal assistant is hired by a private law firm, or a government agency, or a corporation such as a bank or insurance company.

MAJOR COURSES		**Credit**
CJC 115	Criminal Law	5
LEX 101	Introduction to Paralegalism	3
LEX 104	Investigation	3
LEX 111	Legal Writing	2
LEX 113	Family Law	3
LEX 115	Commercial Law I	5
LEX 116	Commercial Law II	5
LEX 117	Torts and Litigation Preparation	3
LEX 132	Legal Research/Bibliography	7
LEX 135	Legal System	5
LEX 205	Constitutional Law	5
LEX 208	Administrative Law	3
LEX 114	Property I	3
LEX 215	Property II: Title Search	3
LEX 216	Property III: Loan Closings	2
LEX 219	Computerized Legal Research	3
LEX 224	Wills	4
LEX 230	Bankruptcy and Collection	3
		67

RELATED COURSES		
OSC 105	Keyboarding	4
OSC 118	Document Production	4
ACC 120	Accounting I	5
CAS 125	Microprocessing Word Processing I	4
POL 250	American State and Local Government	5
MAT 121	Technical Mathematics	5
		27

GENERAL EDUCATION		
ENG 151	English Composition I	5
ENG 152	English Composition II	5
ENG 114	Oral Communication	3
SOC 150	Introduction to Sociology	5
— —	Elective:Humanities/Fine Arts	5
		23

ELECTIVES		
— —	ELECTIVE	3
		3

WORK EXPERIENCE (as an Elective)		
COE 101	Cooperative Work Experience 1	(1)
COE 102	Cooperative Work Experience 2	(1)
COE 103	Cooperative Work Experience 3	(1)
		(3)

TOTAL CREDITS	**120**

PARALEGAL TECHNOLOGY CURRICULUM
The seven-quarter sequence of courses recommended for the full-time student is:

I-FALL
LEX 101
LEX 115
LEX 135
MAT 121

II- WINTER
ACC 120
ENG 151
LEX 116
LEX 117
OSC 105

III- SPRING
ENG 152
LEX 114
LEX 132
OSC 118

IV- SUMMER
LEX 111
LEX 113
LEX 215
CJC 115

V- FALL
LEX 104
LEX 208
LEX 216
LEX 224
LEX 230

VI- WINTER
LEX 205
CAS 125
SOC 150
LEX 219

VII- SPRING
ENG 114
POL 250
Humanities/Fine
Arts Elective
Free Elective

Pharmacy Technology

The Pharmacy Technology curriculum prepares individuals to assist the pharmacist in duties that a nonprofessional can legally perform and to function within the boundaries prescribed by the pharmacist and the employing agency. Graduates may maintain patient's records; fill routine prescription orders; maintain inventories of drugs and supplies; set up, package, and label medication doses; prepare stock solutions and intravenous additives; assist with over-the-counter drugs and health aids; and perform clerical duties, including insurance forms and forms required by third-party payees.

Graduates may be employed in hospitals, in nursing homes, in private and chain drug stores, by drug manufactures, in research laboratories and in wholesale drug companies.

Individuals desiring a career in pharmacy technology should, if possible, take biology, algebra, chemistry and typing courses prior to entering the program.

Specific curriculum information will be provided following approval by the North Carolina Community College System.

Radiography
(RADIOLOGIC TECHNOLOGY)

The radiography curriculum prepares the graduate to use radiation to provide images of tissues, organs, bones, and vessels that comprise the human body. The curriculum includes instruction in patient care and management, radiation protection, imaging procedures, quality assurance, recording media processing, equipment maintenance, interpersonal communication, and professional responsibility through an integration of classroom, laboratory, and clinical education. The radiographer is a skilled healthcare professional qualified to provide patient services using imaging modalities as directed by qualified physicians.

Graduates may be employed in radiology departments in hospitals, clinics, physicians' offices, research and medical laboratories, federal and state agencies and industry.

Graduates of accredited programs are eligible to apply to take the national examination administered by the American Registry of Radiologic Technologists for certification and registration as medical radiographers.

Individuals desiring a career in radiography should take courses in biology, algebra, and the physical sciences prior to entering the program.

MAJOR COURSES		Credit
RAD 100	Introduction to Radiologic Technology	2
RAD 101	Medical Terminology	1
RAD 102	Patient Care in Radiology	3
RAD 103	X-Ray Physics & Equipment	4
RAD 104	Radiographic Procedures I	5
RAD 105	Radiographic Procedures II	5
RAD 106	Radiographic Procedures III	5
RAD 107	Radiation Production & Control	4
RAD 108	Radiographic Image Production	3
RAD 109	Clinical Orientation	2
RAD 110	Clinical Education I	4
RAD 111	Clinical Education II	4
RAD 112	Clinical Education III	5
RAD 201	Radiographic Technique	5
RAD 202	Radiographic Imaging	3
RAD 203	Radiologic Pathology	2
RAD 204	Methods of Quality Assurance	3
RAD 205	Radiation Biology & Protection	4
RAD 206	Radiographic Procedures IV	4
RAD 207	Clinical Education IV	6
RAD 208	Clinical Education V	7
RAD 209	Clinical Education VI	8
RAD 210	Clinical Education VII	8
		97

RELATED COURSES		
CAS 106	Computer Applications	3
MAT 121	Technical Mathematics	5
BIO 250	Anatomy & Physiology I	6
BIO 251	Anatomy & Physiology II	6
		20
GENERAL EDUCATION		
ENG 151	Composition I	5
ENG 152	Composition II	5
ENG 114	Oral Communication	3
PSY 150	Introduction to Psychology	5
		18
ELECTIVES		
___ ___	Elective	3
		3
TOTAL CREDITS		**138**

RADIOLOGIC TECHNOLOGY

I-FALL
MAT 121
BIO 250
RAD 100
RAD 101
RAD 102
RAD 104
RAD 109

II-WINTER
BIO 251
RAD 103
RAD 105
RAD 110

III-SPRING
PSY 150
RAD 106
RAD 107
RAD 111

IV-SUMMER
ELECTIVE
CAS 106
RAD 108
RAD 112

V-FALL
ENG 151
RAD 201
RAD 206
RAD 207

VI-WINTER
ENG 152
RAD 202
RAD 208

VII-SPRING
ENG 114
RAD 203
RAD 204
RAD 209

VIII-SUMMER
RAD 205
RAD 210

Real Estate *(Technical Specialty)*

The purpose of the Real Estate (Technical Specialty) curriculum is to provide the prelicensing education requirements needed for real estate salespersons and brokers.

The courses required by the North Carolina Real Estate Commission for prelicensing which are covered in this curriculum are Fundamentals of Real Estate, Real Estate Law, Real Estate Finance, and Brokerage Operations. In addition to these courses, Real Estate Math is also included.

After successful completion of Fundamentals of Real Estate, an individual may make application with the Real Estate Commission to take the prelicensing real estate salesperson examination. After successful completion of all the courses required by the Real Estate Commission, an individual may make application with the Commission to take the real estate prelicensing broker examination.

Employment opportunities are available in real estate firms as salespersons or brokers as well as a real estate broker in one's own business.

MAJOR COURSES		Credit
RLS 103	Fundamentals of Real Estate	6
RLS 114	Real Estate Law	3
RLS 115	Real Estate Finance	3
RLS 116	Real Estate Brokerage Operations	3
		15
RELATED COURSES		
RLS 109	Real Estate Math	3
		3
TOTAL CREDITS		**18**

Real Estate Appraisal

The purpose of the Real Estate Appraisal curriculum is to provide the prelicensing and the pre-certification appraisal education requirements approved by the N.C. Real Estate Commission.

The courses required by the N.C. Real Estate Commission for prelicensing as a "State-licensed" appraiser are covered in this curriculum. These courses are Introduction of Real Estate Appraisal, Valuation Principles and Procedures, and Applied Residential Property Valuation.

The courses required by the N.C. Real Estate Commission for pre-certification as a "State-certified" appraiser are also provided. These courses are Introduction to Income Property Appraisal, Advanced Income Capitalization Procedures, and Applied Income Property Valuation. A good math background is very important in this curriculum. It is recommended that a

student have mastered competencies found in a basic algebra course before taking Advanced Income Capitalization Procedures.

The courses required for the "State-licensed" appraiser and the "State-certified" appraiser must be completed in sequential order.

In addition to meeting the education requirements to become a "State-licensed" appraiser and/or a "State-certified" appraiser, an individual must pass the appraisal examinations given by the N.C. Real Estate Commission and meet the appraisal experience requirements. A "State-licensed" or "State-certified" appraiser will be able to identify himself or herself to the public as being state licensed and/or state certified, and will be qualified to perform appraisals in federally-related transactions.

MAJOR COURSES		Credit
APR 131	Introduction to Real Estate Appraisal	3
APR 132	Valuation Principles and Procedures	3
APR 133	Applied Residential Property Valuation	3
APR 241	Introduction to Income Property Appraisal	3
APR 242	Advanced Income Capitalization Procedures	3
APR 243	Applied Income Property Valuation	3
TOTAL CREDITS		**18**

ASSOCIATE in ARTS and ASSOCIATE in APPLIED SCIENCE COURSE DESCRIPTIONS

ACC 120 - Accounting I
This first course in accounting covers the principles, techniques, and tools of accounting. The student is introduced to the mechanics of accounting. The process of accounting includes the collecting, summarizing, and analysis of financial information.
Course Hours Per Week: Class 4, Lab 2.
Quarter Hours Credit: 5.
Prerequisites: Score of 40 or better on numerical portion of ASSET test.

ACC 121 - Accounting II
This course is a study of partnership accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing, and interpreting data for management controls rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems.
Course Hours Per Week: Class 4, Lab 2.
Quarter Hours Credit: 5.
Prerequisite: ACC 120

ACC 122 - Accounting III
This is the third course in accounting principles. Emphasis is placed upon the corporate form of business and the related complex accounting procedures that are required for reporting corporate organization operating results and financial position.
Course Hours Per Week: Class 4, Lab 2.
Quarter Hours Credit: 5.
Prerequisite: ACC 121

ACC 128 - Computerized Accounting
This is a course in computer record keeping. The content of the course will include the general ledger and the preparation of financial statements, data entry and updating of accounts receivable and accounts payable, inventory purchase, sales, invoice preparation, and preparation of payroll.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisites: ACC 120, CAS 101

ACC 129 - Taxes I
This course is the application of federal and state taxes on the individual taxpayers level.
It is a study of the following taxes: income, payroll, capital gain, sales and use, and excise.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: BUS 135

ACC 220 - Intermediate Accounting I
This course is a review of the accounting information processing system, the statement of income, and statement of cash flows. The course includes the study of basic interest concepts of future and present values, cash and receivables, and the measurement of cost of goods sold and merchandise inventory.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: ACC 122

ACC 221 - Intermediate Accounting II
The second quarter in intermediate accounting includes the study of property, plant, and equipment and the concepts and methods of depreciation. This is a study of intangible assets, income recognition, short-term and long-term debts by the borrower and the lender. Also, the formation of a corporation and the buying and selling of securities is included in the course.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: ACC 220

ACC 225 - Cost Accounting I
The first course in cost accounting includes the study of cost concepts, cost behavior, job order costing, cost estimation, and allocating overhead costs and variance analysis. The course includes a study of weighted-average and first-in first-out costing, material and lost units costing, and joint product and by-product costing.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: ACC 122

ACC 226 - Cost Accounting II
This course is concerned with standard costs for material and labor, standard costs for factory overhead, the budgeting process, cash budgets, forecasted statements, cost-volume-profit analysis, and the concept of variable costing.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: ACC 225

ACC 230 - Taxes II
This course is a continuation of the study of the following taxes: income, payroll, capital gain, sales and use, excise, and inheritance.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: ACC 129

ACC 231 - Auditing
This course is a study of how account balances are derived and the types of transactions or entries which may alter the proper statement of various account balances. Topics covered include the principles of planning and conducting audits and investigations, collecting data on working papers, arranging and systemizing the audit, and writing the audit report. Emphasis is placed on audit theory, internal auditing, report methods, and internal control.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisite: ACC 220

ANT 150 - Introduction to Anthropology
This course is an overview of the field of anthropology. Topics include the physical evolution of mankind, biological variation within human populations, historical development of cultures, linguistics, and archeological findings.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

APR 131 - Introduction to Real Estate Appraisal (R-1)
This course introduces the student to the subject of real estate appraisal and prepares the student for the R-2 course on "Valuation Principles and Procedures". It begins with coverage of basic real property law, followed by coverage of the various concepts of value and the operation of real estate markets. Relevant mathematical concepts are then reviewed and the student is introduced to statistical concepts used in appraisal practice. Next comes coverage of real estate financing terminology and practices, followed by an introduction to the basics of residential construction and design. The student is then provided an overview of the entire valuation (appraisal) process, and the course concludes with specific coverage of residential neighborhood analysis and property analysis, two of the most important preliminary steps in the appraisal process.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

APR 132 - Valuation Principles and Procedures (R-2)
This course focuses on the procedures (methodology) used to develop an estimate of property value and how the various principles of value relate to the application of such procedures. Emphasis is on appraisal of residential 1-4 unit properties and small farms; however, all the concepts and procedures covered are applicable to the appraisal of all types of properties. The course begins with a review of the appraisal process and proceeds into thorough coverage of the sales comparison approach, followed by site valuation methods used to appraise residential 1-4 unit properties. The cost approach is then covered in depth. The basic concepts and methodology associated with the income approach are covered, with emphasis on direct capitalization using an overall rate and the gross rent multiplier technique. Finally, the student is introduced to the process of reconciling property value estimates obtained through application of the approaches to value.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: APR 131 or an equivalent course approved by the North Carolina Real Estate Licensing Board.

APR 133 -Applied Residential Property Valuation (R-3)
This course covers laws, rules and standards which must be followed by appraisers and focuses on the application of principles and procedures to the appraisal of residential 1-4 unit properties and small farms. The student is first acquainted with federal laws/regulations applicable to appraisers and the provisions of the North Carolina Real Estate Appraisers Act and related Commission Rules. Next comes coverage of the

Uniform Standards of Professional Appraisal Practice (which are part of the Commission's Rules), followed by coverage of appraisal reports, with emphasis on standard report forms. The student then participates in a comprehensive case study of an appraisal of single-family house using the URAR form. Instruction is then provided on various special considerations in appraising other types of residential 1-4 unit properties and in appraising farms. Finally, the student is introduced to appraising special (partial) property interests and to condemnation appraisals.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: APR 132 or an equivalent course approved by the North Carolina Real Estate Licensing Board.

APR 241 - Introduction to Income Property Appraisal (G-1)
This course introduces concepts and techniques used to appraise real estate income properties. It begins with a discussion of underlying economic principles and motivations for investing in income property. The appraisal process is then reviewed with emphasis on income property. This is followed by a discussion of real estate market analysis, property analysis, and site valuation. Mathematical and statistical concepts used in the appraisal of income property are covered next followed by coverage of how to use financial tables and/or financial calculators to solve a variety of problems associated with analysis of real estate income properties, including present value, loan calculations, estimation of net operating income, and estimation of before tax cash flow. Next, students learn how to estimate the value of a real estate income property by using a gross income multiplier and by direct capitalization with an overall rate. Finally, students are introduced to other capitalization rates.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: APR 133 or an equivalent course approved by the North Carolina Real Estate Licensing Board.

APR 242 - Advanced Income Capitalization Procedures (G-2)
This course reviews and then expands on the concepts introduced in Course G-1. The direct capitalization techniques introduced in G-1 are expanded to include various band of investment and residual techniques used in income property appraisal. This is followed by a thorough discussion of the concepts of yield rates and of discounted cash flow analysis (yield capitalization), which is the primary focus of this course. Financial leverage is also discussed so students better understand the relationship between various yield rates and capitalization rates. Several traditional yield capitalization formulas including Inwood, Hoskold, Ellwood and Akerson, are then discussed. Although rendered obsolete by the advent of financial calculators, these formulas are still used by many appraisers and students should be familiar with them. A financial calculator is required for this course.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: APR 241 or an equivalent course approved by the North Carolina Real Estate Licensing Board.

APR 243 - Applied Income Property Valuation (G-3)
This course covers laws, rules and standards which must be followed by appraisers and focuses on the application of principles and practices to the appraisal of income properties. The course begins with a review of federal laws/regulations applicable to appraisers, followed by coverage of the North Carolina Real Estate Appraisers Act and related Commission Rules, and coverage of the Uniform Standards of Professional Appraisal Practice (which are part of the Commission's Rules). Preparation of narrative appraisal reports is then covered, with students also being introduced to the Uniform Commercial and Industrial Appraisal Report (UCIAR) form. Coverage then shifts to appraising leased income properties, with emphasis on the effect of various lease provisions on the value estimate. The student then participates in highest and best use case studies, followed by case studies of appraisals of various types of existing income properties, which is the major focus of the course. The course concludes by covering considerations in appraising various development projects.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: APR 242 or an equivalent course approved by the North Carolina Real Estate Licensing Board.

ART 150 - Design Basics (2-D)
Underlying principles of design are a foundation for any visual work in two dimensions. This course examines many works in order to isolate design elements such as line, shape, and color. Students will complete projects related to these observations, in a variety of media.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

ART 152 - Drawing Fundamentals
An introduction to fundamental drawing problems, stressing line, form, perspective, composition and picture space studies, using ink, pencil and charcoal. Still life landscape, etc. will be studied. The student will also be introduced to the basic visual elements through a theoretical approach.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.

ART 153 - Drawing II
This course is continued from Drawing I. The student will study further drawing techniques and concentrate on still life, portrait, life drawing, and landscape.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ART 152

ART 155 - Beginning Painting
This is a beginning course investigating a variety of media, techniques, and subjects.
Course Hours Per Week: Class 2, Lab 6.
Quarter Hours Credit: 5.
Prerequisite: None

ART 251- Art in the Western World: Ancient through Medieval
This course is an introduction to the history of art, providing a survey of the periods from Prehistoric times through the Gothic period, about 1400 A.D.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

ART 252 - Art in the Western World: Renaissance through Impressionism
This course is a survey of the art of the western world from the beginnings of the Renaissance (c.1400) through the Impressionist period, near the end of the nineteenth century.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

ART 253 - History of Art in the Western World: Post-Impressionism through Contemporary
This course is a survey of the art of the western world from the era of Post-Impressionism (c. 1880) through the present, with attention to major artistic developments.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

ATR 201 - Introduction to Robotics
This is a fundamental course in application, programming, and maintenance of robot devices.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Corequisite: None

AUT 101 - Engine Systems Operation
This course introduces the basic concepts of internal combustion engine operation. Content also includes terminology, identification, and location of all systems and parts of the automobile engine.
Course Hours Per Week: Class 1, Lab 2.
Quarter Hours Credit: 2.
Prerequisite: None

AUT 102 - Heating and Air Conditioning Diagnosis and Repair
Course contents include theory of automotive air conditioning, heating and engine cooling system operation, identification and function of system components and methods for performing system test. Students will also learn the appropriate methods for removing and replacing system components and additives.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: None

AUT 103 - Basic Automotive Electronics
This course is designed to introduce the student to electronics as it applies automotive applications. Topics include Ohms law, semiconductor principles, transistor operation, and introduction to microprocessors.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

AUT 104 - Braking Systems
Course content includes the principles of operation, types, and diagnosis and repair of hydraulic and mechanical braking systems.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: None

AUT 105 - Suspension and Steering Systems
Principles of operation, types, and diagnosis and repair of steering and suspension systems are introduced. Course content is centered on manual and power steering systems, and standard and electronically-controlled suspension systems.
Course Hours Per Week: Class 3, M. Lab 9.
Quarter Hours Credit: 6.
Prerequisite: None

AUT 106 - Electrical Fundamentals and Engine Electrical Systems
Basic principles of electricity will be covered in this course in addition to reading wiring diagrams and the use of test equipment. Course content will also include battery, starter system, and charging system diagnosis and service.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: AUT 103 or permission of instructor

AUT 107 - Engine Performance I
Students are introduced to the basic principles, systems and procedures required for diagnosing and restoring engine performance through the use of electrical and electronic test equipment.
Course Hours Per Week: Class 3, M. Lab 9.
Quarter Hours Credit: 6.
Prerequisite: None

AUT 108 - Chassis Electrical Systems
Instruction will include advanced diagnostics, service, and repair of the following automotive electrical/electronic systems: lighting; gauges; warning devices; driver information; horn; wiper/washer and other automotive accessory systems.

Course Hours Per Week: Class 3, M. Lab 9.
Quarter Hours Credit: 6.
Prerequisite: AUT 103 or permission of instructor

AUT 109 - Engine Performance II
Instruction is provided in the use of scan tools and service manuals used in conjunction with vehicle on board electronic engine control systems to diagnose engine performance and vehicle emission problems. Students will also learn to apply advanced driveability and diagnostic techniques to locate and repair performance problems. Prior to enrolling in Engine Performance II, students should have successfully completed Engine Performance I.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: AUT 107

AUT 110 - Antilock Braking Systems
Instruction is provided in the theory of operation, components, and diagnosis and service of power-assisted and computerized antilock braking systems. Use of specialized diagnostic equipment and service information is emphasized.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: AUT 104 or permission of instructor

AUT 111 - Wheel Alignment
Instruction is provided in two-and four-wheel alignment diagnosis, repair and adjustment.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

AUT 201 - Manual Drive Train and Axles
Students are introduced to principles of power transmissions through front, rear, all-wheel and four-wheel-drive automotive and light truck drive trains. Laboratory experience is provided in troubleshooting, disassembly, repair and reassembly of clutches, drive lines, various types of manual transmissions and transaxles, transfer cases and axle assemblies.
Course Hours Per Week: Class 4, M. Lab 9.
Quarter Hours Credit: 7.
Prerequisite: None

AUT 202 - Automatic Transmissions/Transaxles
Course content includes principles of operation, troubleshooting, disassembly, repair, and reassembling automatic transmissions, and transaxles.
Course Hours Per Week: Class 4, M. Lab 6.
Quarter Hours Credit: 6.
Prerequisite: None

AUT 203 - Engine and Chassis Electrical Systems Application
Upon completion of this course, student should be able to perform most tasks required in service and repair of automotive engine and chassis electrical/electronics systems. Tasks will be performed on "live work" vehicles using manufacturers' recommended procedures.
Course Hours Per Week: Class 3, M. Lab 9.
Quarter Hours Credit: 6.
Prerequisites: AUT 106 and AUT 108 or permission of instructor

AUT 204 - Engine Diagnosis, Repair and Rebuilding
Students are introduced to the techniques and practices used diagnosing, repairing, and rebuilding engines used in front-wheel drive and rear-wheel drive automobiles and light trucks.
Course Hours Per Week: Class 4, M. Lab 6.
Quarter Hours Credit: 6.
Prerequisite: AUT 101 or permission of instructor

AUT 205 - Automotive Climate Control System Diagnosis and Repair
Study of the operation of automotive heating and air conditioning systems to include electrical and mechanical controls. Students to develop competence in testing, servicing, and repair of the systems and system components in a safe and proper manner. Introduction to the automotive climate control (touch pad).
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: AUT 102 or permission of instructor

AUT 206 - Advanced Engine Performance Applications
Upon completion of this course, students should be able to perform tasks required in the diagnosis, service, and repair of automotive engine performance systems. Tasks will be performed on "live work" vehicles using manufacturers' recommended procedures.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: AUT 109 or permission of instructor

BIO 101 - Human Anatomy and Physiology I
This course is a study of the organizational plan of the human body and the body systems concerned with motor activities, control and integration of functions, and reproduction. Laboratory experiences provide opportunities to see animal specimens illustrative of systems being studied.
Course Hours Per Week: Class 4, Lab 2.
Quarter Hours Credit: 5.
Prerequisite: None

BIO 103 - Anatomy and Physiology
This course is a study of the human body and the body systems involved in motor activities, control and integration of functions, and reproduction. Laboratory experiences provide opportunities to study the skeletal system and dissect an animal to study body structures. Some medical and anatomical terminology will be included.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

BIO 107 - Human Anatomy and Physiology II
This course is designed to familiarize the student with the changing body during normal growth and development, both physically and physiologically, as well as psychologically. The different phases of life, what effects society has during these phases, and how the body adjusts accordingly will be studied. The disease process will also be investigated to show how the body strives to maintain homeostasis during illness.

The use and results or medical intervention will covered during this study. Some of the more common diseases will be looked at, and the student will be encouraged throughout this course to apply the material studied to daily living experiences.
Course Hours Per Week: Class 4, Lab 2.
Quarter Hours Credit: 5.
Prerequisite: BIO 101

BIO 110 - General Biology
This course is an introduction to the concepts of biology. Emphasizes the modern view of man and other living organisms. Includes topics on the cell, energy, genetics, and ecology.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

BIO 115 - Terminology and Vocabulary: Medical I
Upon completion of this course, the student shall have an origin and development of word roots, prefixes, and suffixes commonly used in medical records; be able to correlate and use medical word components as proper medical terminology; be able to spell and pronounce medical terms including anatomical terms, diagnostic and therapeutic procedure terms, diseases and conditions, operations and treatments, special procedures; have an understanding of the basic human anatomy; become acquainted with terms which describe positions, directions, and planes of the body; and begin learning the major specialties and subspecialities dealing with the field of medicine.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Corequisite: BIO 250

BIO 124 - Principles of Disease
Upon satisfactory completion of the tasks for Principles of Disease processes, the student will demonstrate knowledge of classification of disease processes according to their etiology and organ system involvement; and presents physical signs and symptoms, complications, and preferred treatment of specific disease processes.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisites: MRE 102, BIO 122

BIO 125 - Sectional Human Anatomy
This course is a study of selected human anatomy in the various body planes with emphasis on the cross sectional presentation. The organs and organ systems of the head, thorax, and abdomen will be introduced from a sectional perspective. Particular attention will be focused on the anatomical relationship and common pathophysiology of organs in these areas. Dissection representations and various imaging modalities will be used to demonstrate the anatomy introduced.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

BIO 150 - General Biology I
The biology of living systems from the biochemical, molecular, and cellular level through the structure and function of the whole organism, including physiology, heredity, development and evolution. Topics include surveys ranging from unicellular specimens through mammalian species.
Course Hours Per Week: Class 4, Lab 4.
Quarter Hours Credit: 6.
Prerequisite: None

BIO 151 - General Biology II
An investigation of the nature of living systems and fundamental principles of scientific processes as they apply to current problems affecting the ecological balance of life on each.
Course Hours Per Week: Class 4, Lab 4.
Quarter Hours Credit: 6.
Prerequisite: BIO 150 or equivalent

BIO 250 - Anatomy and Physiology I
This course covers the structure, functioning, and pathology of the following human body systems: Integumentary, Musculoskeletal, Nervous, the Special Senses, Endocrine, and Reproductive.
Course Hours Per Week: Class 4, Lab 4.
Quarter Hours Credit: 6.
Prerequisite: None

BIO 251 - Anatomy and Physiology II
This course covers the structure, functioning, and pathology of the following human body systems: Urinary, Lymphatic, Cardiovascular, Respiratory, and Gastrointestinal. Introductory medically oriented chemistry and fluid, electrolyte, and acid-base balance are studied in some detail.
Course Hours Per Week: Class 4, Lab 4.
Quarter Hours Credit: 6.
Prerequisite: None

BIO 252 - Microbiology
An introduction to the study of microorganisms and their relation to individual and community health. Groups of organisms studied are yeasts, molds, bacteria, viruses, protozoa, and helminths. Laboratory work involves handling cultures, differential stains, cultivation, and metabolic activities of representative organisms. Problems in sanitation are also considered.
Course Hours Per Week: Class 4, Lab 4.
Quarter Hours Credit: 6.
Prerequisite: None

BPR 104 - Blueprint Reading for Manufacturing I
This is the first course in a series of three in which the student is trained to read blueprints which are used in a manufacturing facility. This course will focus on the fundamental aspects of print reading, such as the types of lines, orthographic projection, auxiliary views, detail and assembly drawings, sectional views, pictorial drawings, the title block, lists of materials, drawing notes, and the drawing change system. Basic sketching as an aid to blueprint reading will be introduced.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

BPR 105 - Blueprint Reading for Manufacturing II
This course is designed to train the student in the reading and interpretation of the more complex blueprints which are found in a manufacturing facility. Prints focusing on assemblies and machining specifications will be studied thoroughly. Sketching, as a means to convey ideas and information, will be emphasized throughout this course of study. Blueprints obtained from local industry will be utilized where applicable.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: BPR 104

BPR 108 - Industrial Blueprint Reading
An in-depth look at industrial prints and procedures. The student will be actively involved with prints that cover topics from basic title block orientation to instrumentation and control diagrams. The intent of this course is to provide the student with a reasonable working knowledge of industrial prints.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

BUS 109 - Professional Development
Students in careers involving office automation need training in technical as well as nontechnical areas. The purpose of this course is to provide students with the kinds of nontechnical knowledge and skills desirable by employers. The course will consist of a variety of activities designed to promote professional demeanor in such areas as attitude, dress, speech, work habits, and interpersonal office communications and relationships.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

BUS 114 - Business Statistics
A basic course in business statistics which includes the flow of funds statement, capital investment, changes in working capital, opportunity costs, internal rate of return, sensitivity analysis, probability distributions, analysis of variance, survey sampling, and correlation.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: MAT 121

BUS 115 - Business Law I
This is an introductory course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

BUS 123 - Business Finance I
This course explains the scope, principles, and social importance of business finance to the different types of business ownership in our economic systems. Through the analysis of the financial statements - the balance sheets and income statements - the sources and uses of funds may be obtained for any form of business.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: ACC 121

BUS 124 - Business Finance II
This course explains the scope, principles, and social importance of business finance to the different types of business ownership in our economic systems. Through the analysis of the financial statements - the balance sheets and income statements - the sources and uses of funds may be obtained for any form of business. Financial statements are used by management as the basis for planning operations, including procurement of adequate financing, and as a means of exercising control over the financial position of the business and the efficient and profitable use of assets.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: BUS 123

BUS 135 - Advanced Business Applications
This course incorporated the students math skills into business applications. Determination and interpretation of various quantitative procedures are emphasized.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisite: Score of 40 or better on numerical portion of ASSET test.

BUS 235 - Business Management
This course explains the principles of business management, including an overview of the major functions of management, such as planning, staffing, controlling, directing, and financing.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

BUS 236 - Human Resource Management
Covers the principles and techniques of office supervision as related to work in administrative office careers. Emphasis is placed upon areas such as: recruitment, selection, placement, training, promotion, health, safety, and services.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

BUS 237 - Principles of Supervision
The student is introduced to the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Major emphasis is placed on the role of the supervisor in securing an effective work force. Methods of supervision are stressed.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

CAS 101 - Computer Familiarization
This is an introductory course designed to give the novice a basic understanding of data processing and information management in today's computer environment. It deals with the currently most used forms of data processing, basic vocabulary tools, and an understanding of the computer as a part of our society.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

CAS 106 - Computer Applications
An introduction to the concepts of computer systems, and their applications using a "windows" oriented presentation, this course develops an understanding of computer hardware and software from the prospective of the average computer user. Emphasis is placed on concepts of the hardware components of a computer and the four major software components; the operating system, word processing, the spreadsheet, and the database. The course is not intended to provide training in any particular application product, but rather to emphasize concepts generic to all similar application packages.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

CAS 109 - Database Processing
An introduction to programmable database management systems. Topics include comparison and contrasting of types of databases (hierarchical, relational, and network), data dictionaries, query languages, report generators, and integrate programming languages. The course will include a survey of major microcomputer and mainframe database systems. Hands-on activities with a programmable database management system will be included.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: CAS 101

CAS 115 - Introduction to Microcomputers and Software
This course will introduce students to the microcomputer and the various types of software that are most often used in an office environment. The students will be prepared for advanced software classes but will not be proficient in any particular software package.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

CAS 120 - Introduction to DOS and Other Operating Systems
This course introduces popular microcomputer operating systems emphasizing DOS but including UNIX and OS/2. The course also covers other pseudo-operating systems such as Windows and menuing environments. The topics covered include: DOS, OS/2, and UNIX commands, hard disk management, Windows software, and menuing software.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

CAS 125 - Microcomputer Word Processing I
This course is an introduction to basic concepts of word processing. Students will use a major commercial word processing program to format, edit, save, retrieve, and print letters, memos, reports and tables.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: OSC 105, CAS 101 or instructor's consent

CAS 126 - Microcomputer Word Processing II
This course builds on the content learned in Microcomputer Word Processing I. In this class the students learn to use more advance features of the word processing program including merging documents, creating tables, inserting graphics in a document, and creating sophisticated reports.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: CAS 125 or instructor's consent

CAS 130 - Spreadsheet Applications I
An introduction to the use and application of microcomputer spreadsheet software to solve various business and financial problems. The student will learn how to create, modify, save, retrieve, and print spreadsheets; enter labels, values, and formulas; copy, format, erase, move, and protect cells; and use intrinsic spreadsheet functions. Student exercise will be drawn from variety of business and financial areas.
Course Hours Per Week: Class 1, Lab 2.
Quarter Hours Credit: 2.
Prerequisite: None

CAS 140 - Introduction to Telecommunications
This course will expose the students to the principles of digital communications with a computer as well as data communications between host computers and between hosts and PCs. The students will learn the underlying principles and the basic hardware. They will install and set up PC software and hardware in order to access computer databases, other PCs, or emulate host computer hardware.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CAS 142 - OS/2 Operating System
This course is an in-depth study of OS/2 Operating System and will address the advantages, the disadvantages and the possible future of this operating system
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: CAS 101, CAS 120

CAS 146 - Introduction to Computers and Multimedia
Students learn about using the computer to integrate and control diverse electronic media such as computer screens, video disc, CD-ROM disks, and speech and audio synthesizers.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: CAS 101, CAS 120

CAS 147 - Introduction to Microcomputer Graphics
This course is an introduction to microcomputer graphic packages. Students will use paint and draw programs as well as clip art and scanned images to produce presentation quality documents. They will learn basic page layout that include both written text and graphic images. The students will use authoring language and software to produce on screen presentations.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

CAS 200 - Database Processing II
A continuation of CAS 109 which provides additional instruction and practice with a programmable database system.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: CAS 109

CAS 201 - Microcomputers for Industry
This course will introduce the student to microcomputers and their applications in modern industry. The student will learn to install and configure various types of hardware and software. Topics of study will include computer interfaces, special application cards, hardware compatibility and software applications for industry.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

CAS 203 - Introduction to Local Area Networks
In this course the student will learn the fundamentals of creating, maintaining, and operating a local area network (LAN) of microcomputers. Several major LAN software systems will be compared. The student will setup and operate a LAN.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: CAS 101, CAS 120, or instructor's consent

CAS 204 - Advanced Local Area Network Administration and Maintenance
Using an existing network, the student will connect a LAN to a mini/mainframe host. The student will be able to set up specialized LAN servers. He will be able to create simple menus for users. He will be able to monitor and analyze LAN performance. The student will also be able to setup a remote, dial-in workstation on the network.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: CAS 203

CAS 208 - Desktop Publishing
This course is an introduction to desktop publishing using a major commercial desktop publishing software package on a microcomputer. Basic principles of commercial graphics and page layout as well as software operation will be covered.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisites: CAS 101 or CAS 125

CAS 210 - Introduction to Mini/Mainframe Operations
This is an introductory course to mini and mainframe computers. The student will learn timesharing and systems management concepts as well as micro-mini communications.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: CAS 101 or instructor's consent

CAS 211 - Spreadsheet Applications II
A continuation of BUS 130 to provide training in the advanced features of mode spreadsheets including macros, graphics, database functions, and importing and exporting data to and from other application software. More complex spreadsheet models will be presented.
Course Hours Per Week: Class 1, Lab 2.
Quarter Hours Credit: 2.
Prerequisite: CAS 130

CAS 220 - Microcomputer Maintenance and Installation
This course is an introduction to microcomputer maintenance and peripheral setup. Topics covered in the course include: mother board switch setting, installing cards, connecting peripherals, and using diagnostic software.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: CAS 101, CAS 120, or instructor's consent

CAS 222 - Microcomputer Training and Support
This course beginning with an introduction to adult training theories followed by lessons covering: sequencing content, presentation methods, effective listening skills, and preparing training aids. Students practice their training skills in the labs.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisites: CAS 101, CAS 120, or instructor's consent

CAS 224 - Microcomputer Systems Project
In this class the student has the opportunity to use the skills and knowledge gained in other microcomputer courses to propose and implement a solution to a computer related business problem. The design will be a system that could actually be used in a business setting. It will cover all phases of the process from analyzing the needs of the business to documenting how the installed system will be supported.
Course Hours Per Week: Class 2, Lab 4.
Quarter Hours Credit: 4.
Prerequisites: CAS 101, CAS 120, CAS 109, CAS 130, CAS 200, or instructor's consent

CHM 101 - Introduction to Chemistry
This course offers a basic introduction to elements, compounds, mixtures, symbols, formulas, and weight relations in reactions and solutions. Students will be introduced to basic laboratory equipment and techniques.
Course Hours Per Week: Class 4, Lab 2.
Quarter Hours Credit: 5.
Pre/Corequisite: MAT 121 or pass Math Pretest

CHM 109 - Water Analysis I
This is a course in the practical analysis of water with emphasis on marine-oriented techniques and procedures.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: CHM 101 or CHM 118

CHM 114 - Basic Chemical Concepts I
This is the first course of a two-quarter sequence in which the basic fundamentals of chemistry are introduced. Topics to be covered include: Measurements; properties of matter; elements, compounds, and mixtures; ions and compound formulas; moles; reactions and weight relations; solutions; and oxidation-reduction reactions. The laboratory will stress routine apparatus and techniques in conjunction with lecture material.
Course Hours Per Week: Class 5, Lab 6.
Quarter Hours Credit: 8.
Prerequisite: Acceptance into MAT 121. (Transfer credit or pass CFCC placement test)

CHM 115 - Basic Chemical Concepts II
This is the second course of a two-quarter sequence in which the basic fundamentals of chemistry are introduced. Topics to be covered include: electrochemistry, gases, pH. and solubility. The laboratory sessions will stress routine apparatus and techniques, including an introduction to spectroscopy. A unit on laboratory hazards and safety is included.
Course Hours Per Week: Class 5, Lab 6.
Quarter Hours Credit: 8.
Prerequisite: CHM 114

CHM 116 - Descriptive Chemistry
A survey of the elements, their "families", properties, compounds, sources, and uses. In the laboratory, preparation, detection and reactions of selected groups of elements are explored. Spectroscopy (introduced in CHM 115) is continued and enhanced. A written report on an assigned element is required.
Course Hours Per Week: Class 2, Lab 4.
Quarter Hours Credit: 4.
Prerequisite: CHM 115

CHM 118 - Basic Chemistry
This course has been designed to acquaint the student with some of the basic chemical concepts. Discussions of hazardous materials will be included.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Pre/Corequisite: MAT 121 or Pass Math Pretest

CHM 130 - Organic Chemistry I
This is a survey course in which the nomenclature and properties of organic compounds are introduced. An introduction to infrared spectra is included.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: CHM 115

CHM 140 - Unit Processes
A laboratory course in which the student will set up and carry out such procedures as distillation, reflux, extraction, chromatography (Column, TLC, GLC, and HPLC), ion exchange, and spectroscopy (IR, UV, VIS, and AA).
Course Hours Per Week: Class 1, Lab 14.
Quarter Hours Credit: 8.
Prerequisites: CHM 116, CHM 130

CHM 150 - Industrial Operations
A survey course in which selected examples of process equipment used in the chemical manufacturing industry are described and discussed. The student is introduced to basic calculations necessary in the design and utilization of such equipment. Field trips to local industries allow the students to observe the equipment in actual size and usage.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisites: CHM 116, CHM 130

CHM 151 - General Chemistry I
General Chemistry I is the first of a tow-quarter sequence introduction to inorganic chemistry. Topics include formulas, equations, stoichiometry, bonding, nomenclature, kinetic theory, solutions, and acids, bases, and salts. Upon completion students will be able to explain the structure, nomenclature, and reaction of various inorganic compounds.
Course Hours Per Week: Class 4, Lab 4.
Quarter Hours Credit: 6.
Prerequisite: MAT 160.

CHM 151 - General Chemistry II
General Chemistry II is the second of a two quarter sequence introduction to inorganic chemistry. Topics include a further study of structures, redox reactions, thermodynamics, and kinetics. Emphasis will be placed on transitional atoms and solutions, chemical equilibrium, Bronsted-Lowry theory, and nuclear reactions.
Course Hours Per Week: Class 4, Lab 4.
Quarter Hours Credit: 6.
Prerequisite: CHM 151

CHM 224 - Water Analysis II
This course a continuation of Water Analysis I as a course in the practical analysis of water with emphasis on marine-oriented techniques and procedures.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: CHM 101 or CHM 118

CHM 231 - Organic Chemistry II
This is a continuation of the Organic Chemistry series in which organic reactions and syntheses are discussed and carried out in the laboratory. The students analyze results with such techniques as ultraviolet (UV) and infrared (IR) spectroscopy, gas chromatography (GC), and liquid chromatography (HPLC).
Course Hours Per Week: Class 3, Lab 6.
Quarter Hours Credit: 6.
Prerequisites: CHM 130, CHM 140

CHM 232 - Organic Chemistry III
A continuation of the Organic Chemistry series in which "real-world" compounds are discussed. Other topics introduced will include: Nuclear Magnetic Resonance (NMR) spectroscopy, Mass (MS) spectroscopy and stereochemistry. In the laboratory, various projects (LC, GC, UV) will be carried out by the students.
Course Hours Per Week: Class 3, Lab 6.
Quarter Hours Credit: 6.
Prerequisite: CHM 231

CHM 233 - Biochemical Concepts
This is a continuation of Organic Chemistry series in which the structure, properties, and metabolism of biomolecules such as carbohydrates, lipids, proteins, and enzymes are discussed. Production formulation, and testing of pharmaceutical and food products are stressed.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: CHM 232

CHM 243 - Industrial Analysis I (Qualitative Analysis)
A laboratory course in which the student will be expected to detect and report the presence of unknown cations in solutions.
Course Hours Per Week: Class 1, Lab 6.
Quarter Hours Credit: 4.
Prerequisite: CHM 140

CHM 244 - Industrial Analysis II (Quantitative Analysis)
This is a laboratory course in which routine quantitative analyses are carried out. The techniques of titration, gravimetry, spectroscopy (UV-Vis, AA, AE), and chromatography (LC, GC) are practiced. Calibrations and simple statistical analyses are stressed.
Course Hours Per Week: Class 1, Lab 6.
Quarter Hours Credit: 4.
Prerequisite: CHM 243

CHM 245 - Industrial Analysis III (Quantitative Analysis)
A survey of the sources, utilizations, analyses and treatments of water. In the laboratory, quantitative analysis which began in CHM 244 is continued, emphasizing water analyses.
Course Hours Per Week: Class 3, Lab 6.
Quarter Hours Credit: 6.
Prerequisite: CHM 244

CJC 102 - Introduction to Criminology
This is a general course designed to familiarize the student with contemporary and historical theories of criminal behavior. An overview of social factors dealing with criminal behavior will also be given.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 103 - Introduction to Criminal Investigation
This is a study of the elements of investigation from discovery through presentation in court. The student is introduced to preliminary investigation, collection and preservation of evidence, interviews and interrogation, descriptions of persons and property, sources of information, investigative report writing and case presentation.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 105 - Firearms and Ballistics
This is a study to help the student develop an understanding, use and respect for various types of firearms and ballistics. Range practice will be given in the use of rifles, shotguns, and pistols with a special effort made to develop proficiency in the use of the service revolver. Instruction will be given in nonlethal weapons such as tear gas, and defensive tactics used in the handling of arrested persons.
Course Hours Per Week: Class 3, M. Lab 3.
Quarter Hours Credit: 4.
Prerequisite: Consent of instructor

CJC 108 - Research and Planning in Criminal Justice
This course allows the student to conduct research and planning under the direct supervision of a criminal justice instructor. The course may be offered in one credit blocks up to five credit hours.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: Consent of instructor

CJC 111 - Introduction to Law Enforcement
This course is designed to acquaint the student with the structure, function, jurisdiction and dynamics of American Law Enforcement Systems.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 113 - Introduction to Courts
This is a course designed to acquaint the student with the structure, function, and dynamics of the criminal courts in America.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: CJC 150 or permission of the instructor

CJC 115 - Criminal Law
This course is a study of North Carolina substantive criminal law. The elements of criminal laws, legal definitions, and rules of evidence are examined.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 126 - Ethics and Community Relations
The study of the criminal justice system and its relationships to the community. The course will include attitudes, community tensions, metropolitan growth, ethics, and social control.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 130 - Law Enforcement Training
This course is designed to provide the student with the skills and knowledge necessary to perform those tasks essential to function in law enforcement. The course consists of 550 hours of instruction in the following topic areas:

(1)	Course Orientation	8 Hours
(2)	Constitutional Law	4 Hours
(3)	Laws Of Arrest, Search, and Seizure	16 Hours
(4)	Mechanics of Arrest: Arrest Procedures	8 Hours
(5)	Law Enforcement Communications and Information Systems	4 Hours
(6)	Elements of Criminal Law	24 Hours
(7)	Defensive Tactics	24 Hours
(8)	Juvenile Law and Procedures	8 Hours
(9)	First Responder	40 Hours
(10)	Firearms	48 Hours
(11)	Patrol Techniques	16 Hours
(12)	Crime Prevention Techniques	4 Hours
(13)	Field Notetaking and Report Writing	12 Hours
(14)	Mechanics of Arrest; Vehicle Stops	6 Hours
(15)	Mechanics of Arrest; Custody Procedures	2 Hours
(16)	Mechanics of Arrest; Processing Arrestee	4 Hours
(17)	Crisis Management	10 Hours
(18)	Special Populations	12 Hours
(19)	Civil Disorders	8 Hours
(20)	Criminal Investigations	36 Hours
(21)	Interviews; Field and In-Custody	8 Hours
(22)	Controlled Substances	6 Hours
(23)	ABC Laws and Procedures	4 Hours
(24)	Electrical and Hazardous Materials Emergencies	12 Hours
(25)	Motor Vehicle Law	20 Hours
(26)	Techniques of Traffic Law Enforcement	6 Hours
(27)	Traffic Accident Investigation	20 Hours
(28)	Law Enforcement Driving Training	44 Hours
(29)	Preparing for and Testifying in Court	12 Hours
(30)	Dealing with Victims and the Public	4 Hours
(31)	Ethics of Professional Law Enforcement	8 Hours
(32)	Physical Fitness	44 Hours
(33)	Civil Process	24 Hours
(34)	Supplemental Custody Procedures	8 Hours
(35)	Testing	18 hours
(36)	Review	18 Hours
		Total: 550 Hours

Course Hours Per Week: Class 17, Lab 0, Shop/Clinical 33.
Quarter Hours Credit: 28.
Prerequisite: None

CJC 140 - Fingerprint Identification
This course is a survey of the use of fingerprints in criminal investigations. Examination, comparison, and classification of fingerprints is included. The Henry System of classification is taught with additional modifications and F.B.I. extensions.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 141 - Handwriting Identification
This is an introduction to the fundamentals of handwriting identification. An analysis of standard and deviant letters is studied in comparing questioned writings.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 150 - Introduction to Criminal Justice
This is a general course designed to introduce the student to the historical, philosophical and contemporary views in the criminal justice system. This course also includes a study of the local, state and federal criminal justice agencies, their jurisdiction, organization, purpose, and objective.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 160 - Introduction to Corrections
This course includes the history of corrections in the United States, prison designs, inmate problems, treatment, methods and procedures in correctional institutions.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 205 - Scientific Evidence
This course examines the admissibility of evidence in a court of law. Emphasis is given to the types of scientific evidence which is within the jurisdiction the courts.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 206 - The Juvenile Justice System
This is a general course designed to acquaint the student with problems and issues pertaining to the juvenile offenders and how they are processed by police, courts corrections systems.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 208 - Arson Investigation
This is a study of the techniques used to investigate arson cases. It include investigative techniques, crime scene investigation, and laws applicable to unlawful burning.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 211 - Introduction to Criminalistics
This is a general survey of the methods and techniques used in modern scientific investigation of crime, with emphasis on the practical use of these methods by the students. Laboratory techniques will be demonstrated and the student will participate in actual use of scientific equipment.

Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 220 - Criminal Justice Organization and Management
Included in this course is an examination of the principles of organizational structure within police agencies. The duties and responsibilities of the police administrative staff will be examined. Recruitment, training, and discipline will be presented as part of the course study.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 222 - Crime Scene Processing
This is a course which emphasizes collecting physical evidence at the crime scene. Topics included in this course are identification of physical evidence, the care of physical evidence, and the various types of evidence.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 225 - Security and Crime Prevention
This course is a general survey of the methods and techniques utilized in theft prevention. Primary emphasis will be placed on alarm systems used in industry.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 245 - Security Management
This course includes aspects of private security as well as management design for protecting property. Analysis of security, organizations, and protection systems will be discussed.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

CJC 250 - Contemporary Issues in Criminal Justice
This course is a study of controversial issues affecting the criminal justice system. Topics may include use of deadly force, civil liability, police discretion, politics, and unionism.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

COE 101 - Cooperative Work Experience
This course is designed to enable qualified students to combine classroom learning with career-related work experience that is closely related to students' academic study. Emphasis is placed on parallel plans of school and work in business, industry, or government structured by measurable learning objectives. Upon completion, students will be able to locate permanent employment after graduation more readily because of their on-the-job work experience. Approval for Cooperative Work Experience must be obtained from the Co-op Director and department chair.
Course Hours Per Week: Co-op Hours 10
Quarter Hours Credit: 1.

COE 102 - Cooperative Work Experience,
COE 103 - Cooperative Work Experience,
Refer to COE 101

CSC 215 - Introduction to Programming in C
This is an introductory course in C Language. Laboratory exercises are used to provide experience in solving business data processing problems using C Language. C programs may be executed on a microcomputer running MS-DOS/PC-DOS or the UNIX operating system.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

CSC 217 - Introduction to Pascal Programming
In this introductory course the students will use Pascal programming language on a micro computer. They will learn how to use a structured programming language with an emphasis on modular programming concepts.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

CSC 249 - Introduction to Operating Systems
A systematic approach to the concepts of operating systems. The student will study how traditional operating systems manage processes, memory, and file systems. The student will do basic operating system programming using: MS-DOS, UNIX, OS/2 and Windows 95.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3
Prerequisite: ELN 141

CSC 250 - C Language Programming I
This class is designed as an introduction to C Language fundamentals for Engineering Technology. Topics will include C environment, program structure, elements of C, C operators, functions, and debugging.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: CAS 106 or equivalent

CSC 251 - C Language Programming II
This class is a continuation of CSC 250. Topics will include pointers, passing variables, scope of variables, strings and arrays, and structuring data.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: CSC 250

DDF 201 - Design Drafting I
Topographical drawing and mapping will be introduced. Fasteners, screw threads, springs, and keys will be covered with emphasis on specifying and delineating. Intersections and developments will be included with model solutions accompanying the problems. Projects may be assigned using CAD or conventional methods.
Course Hours Per Week: Class 6, M. Lab 6
Quarter Hours Credit: 8.
Prerequisite: DFT 103

DDF 202 - Design Drafting II
Basic mechanisms of motion transfer will be studied as they relate to power trains. Assembly and subassembly drawings, with fit and function stressed, will be completed. Projects may be assigned using CAD or conventional methods.
Course Hours Per Week: Class 6, M. Lab 6.
Quarter Hours Credit: 8.
Prerequisite: DDF 201

DDF 203 - Design Drafting III
Research to solve a problem in design will be implemented by consulting various manuals, periodicals, and through laboratory experiments. Preliminary design sketches, layout drawings, detail drawings, assembly and subassembly drawings and specifications are required as a part of the problem. CAD will be continued with an emphasis on design.
Course Hours Per Week: Class 6, M. Lab 6.
Quarter Hours Credit: 8.
Prerequisite: DDF 202

DFT 100 - Technical Drafting
The field of drafting is introduced. The student learns the elementary practices and principles employed by drafters. This knowledge is put to use by making actual drawings. Basic shape and size descriptions are included for communication from technician to machinist or other artisan.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

DFT 101 - Technical Drafting I
Students are introduced to the principles of the graphic language and the practices employed by drafters. This knowledge is put to use by making actual machine drawings. Skills are developed using conventional drafting equipment. In depth studies of orthographic projection, geometric construction, and dimensioning are included for communication from technician to machinist or other artisan. Compliance with ANSI standards is stressed.
Course hours Per Week: Class 3, M. Lab 9.
Quarter Hours Credit: 6.
Prerequisite: None

DFT 102 - Technical Drafting II
Students will apply orthographic projection principles to the more complex drafting problems. Primary and secondary auxiliary views, simple and successive revolutions, and all types of sectional views will be included. The study of dimensioning practices will be continued with an emphasis on ANSI Standards. Drawings will be assigned using conventional methods.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: DFT 101

DFT 103 - Technical Drafting III
This course covers the graphic symbols for electrical and electronic diagrams, use and application of welding symbols, and principles and methods of pipe drafting as per ANSI Standards. The procedures for drawing and projecting axonometric, oblique, and perspective drawings will be included with an emphasis on practical application. Drawings will be assigned using conventional equipment.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: DFT 102

DFT 117 - Drafting and Blueprint Reading
The field of drafting is introduced. The student learns the elementary practices and principles employed by drafters. This knowledge is put to use by reading actual blueprints. Orthographic views, pictorial sketching, and dimensioning are included for communication from technician to machinist or other artisan.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

DFT 151 - Computer Aided Drafting I
This course is an introduction to Computer Aided Drafting and Design Systems. Included are terminology; capabilities of a CAD system; major components of a CAD system; CAD drawing, editing, and modifying procedures; commands and modes for drawing basic geometric shapes; plotting, dimensioning, layering, and zooming technique.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: CAS 106 and knowledge of drafting

DFT 152 - Computer Aided Drafting II
A continuation of DFT 151, Computer Aided Drafting I. Students will continue to work with new commands and command structure. Problems and exercises will place emphasis on advanced 2D drawings stressing ANSI standards. Wire frame and isometric 3D drawings will be introduced.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: DFT 151

DFT 200 - Geometric Tolerancing
This course introduces the standard drafting practices per ANSI Y14.5M which includes general dimensioning, general applications of tolerances and limits, and tolerance of position and form. The advantages of true position tolerancing will also be covered.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisite: DFT 102 or BPR 105 or consent of instructor

DFT 206 - Computer Aided Design/Plant Layout
The computer as an instrument for rapid development of concepts in design. Emphasis will be placed on plant arrangement where work areas and equipment layouts are rendered practical and safe. Computer Aided Design and Manufacturing will be continued through demonstrations and limited hands-on exercises.
Course Hours Per Week: Class 1, M. Lab 9.
Quarter Hours Credit: 4.
Prerequisite: DFT 106

DFT 207 - Computer Aided Design
This course introduces the student to the use of computers for designing mechanical devices. The student will utilize personal computers to design mechanical objects and prepare necessary drawings for manufacturing. The geometry data will then be transferred to the Computer Aided Manufacturing (CAM) system for use in programming Computer Numerical Control (CNC) coded machine tools.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: BPR 106

DRA 150 - Introduction to Theatre
An examination of theatre through dramatic literature and history, the artistic elements of acting and directing, and critical appreciation.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

DRA 160 - Introduction to Acting
A look at acting styles and techniques and ways to develop them through scene-work. The student will acquire practice in developing and controlling the voice, body, and emotions as instruments of expression.
Course Hours Per Week: Class 5, Lab 2.
Quarter Hours Credit: 6.
Prerequisite: None

DRA 161 - Play Production
A look at the varied requirements for staging a play through choosing and mounting a production in a studio theater.
Course Hours Per Week: Class 5, Lab 2.
Quarter Hours Credit: 6.
Prerequisite: DRA 150

DRA 175 - Introduction to Film
An examination of the elements that make film a cohesive art form through the study of certain films. Film history and the technical and creative processes of editing, cinematography, acting, directing and other filmmaking tools will be briefly examined.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

ECL 113 - Environmental Measurements
This is a field course in which students will be involved in doing ecological surveys of the Cape Fear region. Collection methods and data compilation will be emphasized throughout the course.

Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

ECO 102 - Economics I
This course introduces students to the rudiments of economics. The course emphasizes supply and demand analysis, market equilibrium and cost/revenue analysis from the points of view of consumers and the individual firm.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

ECO 104 - Economics II
This course extends the basics acquired in Economics I into coverage of the economy of an entire country. The course emphasizes national economic measurements, growth cycles, and government policies. Economics examines the monetarist and neo-keynesian debates of economic policy.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

ECO 150 - Microeconomics
This course introduces students to the principles of economics. Emphasis is placed on supply and demand analysis, market structures, and cost-revenue analysis from the perspective of the consumer and the individual firm.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

ECO 151 - Macroeconomics
This course examines the basic concepts of a national economy with emphasis on fiscal and monetary policies, measures of economic performance, growth cycles, economic indices, and models.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

ECO 200 - Managerial Economics
Studies the use of accounting, statistical and marketing information available to management to make future-oriented business decisions. The emphasis is on the use of this information to make decisions for the firm such as profit-maximizing production levels, loss minimization and probability budgets
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ECO 102

EDU 101 - Introduction to Early Childhood Education: Child Care Credential I
This course provides the first half of instruction necessary to qualify for the NC Child Care Credential. Areas of study include introduction to the child care profession, child growth and development, and getting to know the whole child.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

EDU 102 - Introduction to Early Childhood Education: Child Care Credential II
This course provides the second half of instruction necessary to qualify for the NC Child Care Credential. Areas of study include developmentally appropriate practices, positive guidance, and providing a safe and healthy environment.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

EDU 106 - Early Childhood Overview
This course provides opportunities to investigate the field of early childhood education. Topics include the history of the early childhood movement, qualities and roles of the caregiver, and professional ethics.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

EDU 107 - Early Childhood Principles and Practices
This course focuses on the components of the early childhood curriculum. Topics include the importance of play in the early childhood environment, developmentally appropriate environments, and various types of early childhood programs/ curricula.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

EDU 110 - Seminar Practicum: Preschool Environment
This supervised practicum experience gives the student an opportunity to apply age-appropriate principles of child development, relationships, and learning in a preschool environment. The seminar gives the student an opportunity to evaluate practical experiences and to discuss curriculum components.
Course Hours Per Week: Class 1, Lab 10.
Quarter Hours Credit: 2.
Prerequisites: EDU 117, EDU 118 or permission from the instructor

EDU 117 - Child Growth and Development I
This course is an introduction to the field of child growth and development. Specific topics will include historical perspectives on children, research and observation techniques, terminology, and the areas of growth and development. Emphasis will be placed on conception, prenatal development, the birth process and the neonate.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: EDU 117 or permission from the instructor.

EDU 118 - Child Growth and Development II
This examines the growth and development of infants through early childhood. Specific emphasis will be placed on factors influencing development in the physical/motor, cognitive/ language, and social/emotional areas.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: EDU 117 or permission from the instructor

EDU 119 - Child Growth and Development III
This course will examine the growth and development of middle childhood and adolescence. Specific emphasis will be placed on factors influencing development in physical/motor, cognitive/language, and social emotional areas.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisites: EDU 117, EDU 118 or permission from the instructor

EDU 122 - Child Health, Safety, and Nutrition
This course will introduce the factors influencing a young child's health. Emphasis will be placed on safety precautions and treatment procedures, and nutrition concepts and requirements.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

EDU 125 - Creative Activities in Early Childhood
This course emphasizes the use of creative activities for children in art, music, movement, and dramatics. Topics include creative learning environments, planning and implementing developmental appropriate teaching materials for classrooms.
Course Hours Per Week: Class 5, Lab 3.
Quarter Hours Credit: 6.
Prerequisites: EDU 117 and EDU 118 or permission from the instructor

EDU 211 - Infant/Toddler Development and Activities
This course emphasizes the skills needed to effectively implement group care for infant/toddlers. Topics include principles of child development, and developmentally appropriate practices.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisites: EDU 117 and EDU 118 or permission from the instructor

EDU 215 - Behavior Management
This course presents guidelines for positive child guidance and includes the study of behavior management as an educational tool. Students will explore strategies for guiding behavior using productive and positive techniques.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisites: EDU 118 and EDU 119 or permission from the instructor

EDU 216 - Communication Activities in Early Childhood
This course is designed to teach methods of developing communication skills in children. Emphasis will be placed on the basic components of the language arts speaking, listening, writing, and reading (beginnings of literacy), and their interrelatedness.
Course Hours Per Week: Class 5, Lab 3.
Quarter Hours Credit: 6.
Prerequisites: EDU 118 and EDU 119 or permission from the instructor

EDU 217 - Exploration Activities in Early Childhood
This course is an introductory study of discovery experiences in science, math, and social studies. Topics will include concepts, facts, phenomena and skills in each area which young children think about, discover, and develop.
Course Hours Per Week: Class 5, Lab 3
Quarter Hours Credit: 6.
Prerequisites: EDU 118 and EDU 119 or permission from the instructor

EDU 220 - Seminar Practicum: Special Needs Environment
This supervised practicum experience gives the student an opportunity to apply age-appropriate principles of child development, relationships, and learning in a special needs environment. The seminar gives the student an opportunity to evaluate practical experiences and to discuss curriculum components.
Course Hours Per Week: Class 1, Lab 10.
Quarter Hours Credit: 2.
Prerequisites: EDU 117, EDU 118, EDU 119, EDU 225 or permission from the instructor

EDU 223 - Working with Child's Family and Community
This course studies the relationship among the family, and programs for children/school and community. Topics will include study of the family's influence on the child, the interaction between the family and the caregiver/teacher and the role of the caregiver/teacher in assisting families with their children and community resources which serve children and their families.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

EDU 225 - Working with Children with Special Needs
This course is an introduction to working with children who have special needs. Topics include identification, causes, assessment, intervention strategies and techniques and support services.
Class Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisites: None

EDU 231 - Early Childhood Curriculum Planning
This course reviews major elements of early childhood curriculum planning. Topics include assessments of children and curriculum, instructional planning, scheduling, and environment.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisites: EDU 118 and EDU 119 or permission from the instructor

EDU 232 - Child Care Administration
This course presents policy and procedures for operation of group care for children. Topics include principles of supervision, budgeting and funding, relationships with service and regulatory agencies and state licensing guidelines. This course meets the NC Child Day Care Section's requirement of child day care administrators.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisites: EDU 118, EDU 119, EDU 106, EDU 122 or permission from the instructor

EDU 250 - Teacher, School, and Society
An introduction to the profession of teaching that acquaints prospective teachers with the diverse roles of teachers. Focuses on the teacher as a decision-maker; careers in education; the social, historical and philosophical foundations of education; governmental and organizational aspects of schools; and current and future trends in American education. Observation skills are developed through field experience.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisites: None

ELC 100 - Marine Electricity I
This course is an introduction to basic theories and principles of electricity Basic electrical units, Ohm's Law, symbols, power sources and electrical measuring instruments in coordination with basic DC series and parallel resistive circuits will be covered. Practical applications will be stressed. This course is not transferable to the Electronics Engineering or Instrumentation Technology curriculums.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

ELC 101 - Marine Electricity II
This course is a continuation of ELC 100. It will cover an introduction to magnetism, inductance, alternating current, theory, capacitance, reactance phase relationship, AC power and transformers, generators, alternators, and distribution system. Voltage and current regulation along with practical applications will be stressed. This course is not transferable to the Electronics or Instrumentation Technology curriculums.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: ELC 107, or ELC 100, plus proficiency test

ELC 107 - Electricity I
This fundamental course is an introduction to basic theories and principles of electricity. It includes electrical symbols, electrostatics, Ohm's Law, direct current (DC) circuits, power, power sources (DC), circuit theorems, electrical measuring devices, and an introduction to electromagnetism, capacitance and inductance. Practical applications are highly stressed.
Course Hours Per Week: Class 4, M. Lab 6.
Quarter Hours Credit: 6.
Pre/Corequisite: MAT 121

ELC 108 - Electricity II
This course is a continuation of ELC 107. It is an introduction to alternating current theory, sine and pulse wave analysis, inductance, capacitance, reactance, phase relationships, AC power, and transformers. Simple power distribution systems are studied.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: ELC 107
Pre/Corequisite: MAT 122

ELC 109 - Electricity III
This course is a continuation of ELC 108. Topics studied will include RC, RL, RLC circuits and resonance filters. The practical applications of theses concepts are highly stressed.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: ELC 108
Pre/Corequisite: MAT 123

ELM 208 - Control Systems
This course covers the basic principles of electrical, electronic, and pneumatic control systems as related to industrial applications. The basic design and functions of circuits, motors, tranducers, and servomechanisms, and a review of the National Electric Code are included.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: PHY 102

ELN 102 - Electronic Fabrication Techniques
This is a basic course to introduce electronic circuit construction and wiring practices. Topics included are, soldering/desoldering techniques, component layout, and the interpretation of schematic wiring diagrams. The course is structured to increase the students' manipulative skills using common electric handtools.
Course Hours Per Week: Lab 2.
Quarter Hours Credit: 1.
Prerequisite: None

ELN 106 - Electronics I
This fundamental course covers the application of electronic symbols, on schematic diagrams, and the functional application of test equipment typically used by technicians. It further introduces the student to the basics of semiconductor physics and two-terminal semiconductor devices.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Pre/Corequisites: ELC 107, MAT 121

ELN 107 - Electronics II
This course is a continuation of ELN 106. It covers the theory and applications of two-terminal semiconductor devices, and bipolar transistor circuits, including biasing methods, small-signal and power amplifier analysis, interstage coupling and feedback.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: ELN 106
Pre/Corequisites: ELC 108, MAT 122

ELN 108 - Electronics III
This course is a continuation of ELN 107. Topics covered are power supplies and regulators, theory and application of Junction and MOS field effect transistors, multistage amplifiers, feedback methods, oscillators, multistage circuitry, power amplifiers and feedback.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: ELN 107
Pre/Corequisites: ELC 109, MAT 123

ELN 121 - Digital Electronics I
This course deals with Boolean Algebra as applied to digital logic and control devices. Principles of Boolean Algebra, Karnaugh mapping, and various number systems will be examined. Practical circuits using industry standard components will be constructed during laboratory sessions.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: ELN 108

ELN 122 - Digital Electronics II
Basic computer and static control logic circuits will be studied. Discreet components will be used to construct logic circuits and investigate voltage levels, propagation delays and switching speed. Boolean principles relating to each type gate will be investigated.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisites: ELN 108, ELN 121

ELN 140 - Introduction to Marine Electronics
This course is a continuation of ELC 101 emphasizing marine related applications. The course of study includes an introduction to radar, sonar, communications, sound and electromagnetic wave propagation. Common types of equipment, circuits, testing and measuring devices are studied. In all areas study, practical applications are stressed.
Course Hours Per Week: Class 2, Lab 4.
Quarter Hours Credit: 4.
Pre/Corequisite: ELC 101

ELN 141 - Personal Computer Systems
This course provides the student with experience in the use, installation, and troubleshooting of personal computer software. Topics include: DOS commands, system files, batch files, file hierarchy, devices and drivers, hard disk preparation, application software installation and configuration, backups, file management, PC diagnostics and GUIs.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisites: None

ELN 202 - Communication Electronics
This course will present basic laws, regulations and operating procedures governing communications in the United States. An in-depth study of solid state device applications in various communication circuits will be conducted. Theory of and special uses for vacuum tubes will be presented.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: ELN 108

ELN 205 - Analytic Electronic Troubleshooting
This course is designed to follow ELN 204. It is an advanced study of analytic techniques for troubleshooting complex electronic systems.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: ELN 204

ELN 208 - Service and Maintenance of PC Hardware
This course covers the maintenance and repair of the personal computer hardware. The major hardware components PC systems are studied. The student will get hands-on experience in the repair, maintenance, and troubleshooting of the motherboard, adapter cards, disk drives, power supplies, and peripherals.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisites: ELN 102, ELC 108

ELN 221 - Microprocessors I
An in-depth study of integrated circuit logic devices used in microprocessor applications will be conducted. This study will include logic gates, memory devices, arithmetic logic units and input/output ports.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: ELN 122

ELN 222 - Microprocessors II
This course will be a continuation of ELN 221. Logic concepts previously studied will be used in an in-depth investigation of various microprocessors. Current uses of microprocessors in industrial applications will be presented. Applications of both Machine and Assembly Languages will be presented.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: ELN 221

ELN 223 - Microprocessor Industrial Control Applications
Current uses of microprocessors in various industrial control applications will be studied in this course.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: ELN 221

ELN 224 - Measurement and Control I
This course is an introduction to the study of process instrumentation. The need for process control will be control are studied. An overview of the various types of process measurements will be presented. In lab, the students will be introduced to the various types of pressure and electrical calibration methods.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisites: ELN 108, ELN 121, PHY 100, CHM 118

ELN 225 - Measurement and Control II
This course is a study of control theory utilizing electronic and pneumatic instruments. Control loops, electronic, and pneumatic will be studied, constructed, and calibrated for actual "in-service" conditions.
Course Hours Per Week: Class 2, M. Lab 9.
Quarter Hours Credit: 5.
Prerequisite: ELN 224

ELN 226 - Measurement and Control III
This course is a continuation of ELN 225, Measurement and Control II. Emphasis will be placed on current techniques in industrial instrumentation, instrument installations and environmental conditions affecting industrial applications of automated systems. Environmental control utilizing electronic and pneumatic systems will be studied.
Course Hours Per Week: Class 2, M. Lab 9.
Quarter Hours Credit: 5.
Prerequisite: ELN 225

ELN 227 - Industrial Motor Control
This course offers a familiarization of alternating and direct current motors and controls used in industrial applications. Basic alternating and direct current motor theory will be studied. Various types of AC and DC controls will be studied including DC variable speed drives and AC variable frequency drives.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisites: ELN 108, ELN 121, PHY 100

ELN 231 - Electronics in Industry
This course emphasizes theory and application of electronic devices used in industrial monitoring and control applications. It will include solid state devices, basic control concepts, control circuits, transducers, variable speed motor controls, and magnetic amplifiers.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisites: ELN 108, ELN 122

ELN 236 - Industrial Field Trips
This course will consist of field trips to local industries and lectures by instrument technicians and engineers who work with the company.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisites: ELN 108, ELN 121

ELN 244 - Computer Project (Software)
This course will be oriented toward microprocessor applications.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: ELN 237

ELN 248 - Introduction to the Digital Computer
This course discusses the implementation of a simple digital computer using concepts studied in ELN 121 and ELN 122. The computer's central processor and its operation are studied. The student will learn digital design techniques from concept through construction. The student will be required to complete a digital design project.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: ELN 122

ELN 259 - System Performance and Security
The student will become familiar with methods to analyze system performance both for PCs and networks. The student will learn the elements of systems security and control including a study of virus protection and disaster recovery techniques. Students will learn the economics of security and performance. Students will learn how to choose the most effective level of security for a given operational goal.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisites: ELN 262, CSC 249

ELN 260 - Data Communications
This course will provide the student with a general overview of digital and data communications. The student will be exposed to topics such as the telephone system, data link protocol, fiber optics and satellite communications.
Course Hours Per Week: Class 2.
Quarter Hours Credit: 2.
Prerequisite: ELN 108

ELN 261 - Local Area Networks I
This course is designed to introduce the student to the hardware configuration of a LAN. The student will be required to design and give a presentation on a LAN System.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: ELN 260

ELN 262 - Local Area Networks II
This course will be a continuation of ELN 261. This course will introduce the student to the software involved in setting up a LAN.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: ELN 261

ELN 263 - Computer Integrated Manufacturing
This course serves as an introduction to the subject of computer integrated manufacturing (CIM), and provides a comprehensive survey of technical topics related to CIM.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: ELN 237

ELN 270 - Data Communications and Local Area Networks
This course is designed to present the fundamentals and essential topics prevalent in data communications. The topics will include networks, protocol, interface standards, modems, and error detection.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: ELN 122

ELN 271 - Electronics Projects
This course will take the student through design procedures, prototype, and construction of an electronic system. The project will center around the concept of Total Quality Management and team work. The project will be approved by the instructor.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisites: ELN 122, ELN 205

ELN 272 - Programmable Logic Controllers
This course will provide a comprehensive treatment of hardware and software applications for Programmable controllers. It will present a logical progression of the fundamental concepts of PLC application and programming. It will also discuss the basic components of PLC systems, PLC setup and troubleshooting techniques.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: ELN 122

ELN 273 - Computer Integrated Manufacturing and Robotics
This course will present theory and application of robotics, servomechanisms, transducers, sensors, PLC's and microprocessors. The class will culminate by applying the preceding topics to a Computer Integrated Manufacturing system.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisites: ELN 122, ELN 221, (Programmable Logic Controllers; needs number)

ELN 274 - Optical Electronics
This course will present theory and application of light and electromagnetic waves, dielectric waveguides and optical fibers, electroluminescence, lasers, photodetectors, optical receivers, and optical fiber communication systems.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: ELN 202

ENG 070 - Basic English
This course is designed to increase vocabulary, to give the student practice in using new words in his or her own writing. Vocabulary study includes words and their definitions, homonyms, antonyms, and synonyms. Journal writing and response to readings also will be a focus.
Laboratory work may be required.
Course hours per week: 3
Institutional hours credit: 3
(Does not count toward graduation)
Placement by entry testing

ENG 080 - Basic Communication Skills
This course improves the student's basic English skills through work on the fundamentals of grammar and punctuation. Correct usage is practiced through the writing of Journals and the writing of clear and mechanically correct sentences. Further writing is in response to readings of selected essays. Laboratory work may be required.
Course hours per week: 5
Institutional hours credit: 5
(Does not apply toward graduation)
Prerequisite: ENG 070 or placement by entry testing.

ENG 090 - Building English Proficiency
This course focuses on basic grammar and writing skills. The student practices correct usage in writing clear paragraphs, journal responses, and simple essays. Laboratory work may be
Course hours per week: 5
Institutional hours credit: 5
Prerequisite: Satisfactory placement of Eng 080 or placement by entry testing

ENG 091- Writing for College
This course reviews basic rules of grammar as students practice techniques of writing essays. Continued emphasis is placed on paragraph development. Laboratory work may be required.
Course hours per week: 5
Institutional hours credit: 5
(Does not apply toward graduation)
Prerequisite: Satisfactory Completion of ENG 090 or placement by entry testing.

ENG 101 - Grammar
The course is designed to aid the student in the improvement of grammatical self-expression. This approach is functional with emphasis on grammar and sentence structure. It is intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: Placement by entry testing

ENG 114 - Oral Communication
This course considers the basic concepts and principles of oral communication in order to help the student improve his speech communication skills. Emphasis is placed on organization of thoughts, listening, audience analysis, visual and audiovisual aids, voice, diction, pronunciation, projection, and attitude. Students will learn techniques to improve speech habits and mannerisms, and will produce poised, confident, effective oral presentations.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

ENG 151 - English Composition I
This course is an introduction to composition at the college level. Although it is designed for the student who already meets the basic competencies in the areas of sentence sense and basic grammar, a review of grammar, usage, and diction is included. The student practices techniques of invention, development, organization, editing, and revision. The course introduces the processes of writing and the structuring of paragraphs. Emphasis is placed on learning the modes of narration, exposition, description, and argumentation. Frequent writings are required.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: Evidence of competence on the Reading and English Placement Tests or a grade of satisfactory in RED 090 and ENG 091.

ENG 152 - English Composition II
This course, a continuation of English 151, will present the basic writing processes and techniques needed to produce effective essays. Through reading and reacting to printed and other materials, the student develops thinking skills which will be applied to the construction of themes and a research paper. Basic techniques of research and documentation such as notetaking, summarizing, critiquing, and quoting are studied.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 151

ENG 155 - Technical and Business Writing
This writing for business and industry instructs students in creating informal and formal reports, business letters, memos, applications and resumes. Emphasis is placed on style, form, and organization. The course includes research techniques and graphic aids in the formal report and is adaptable to the student's major field of study. This course may be computer instructed.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 151

ENG 160 - Introduction to Literature
As an introduction to literature through study of the genres of drama, poetry, and the short story, the student studies plot, characterization, figurative and symbolic language, form, and theme. Interpretation of literary works will be emphasized, and a number of interpretive paragraphs and themes will be written.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 152

ENG 250 - Folklore
This course on contemporary folklore will place emphasis on folklore as an informal cultural process rather than as a particular type of cultural expression. The various genres of folklore will be studied as well as their methods of transmission. Students will participate in a folklore field work project in which they will gain hands-on experience in the collection of folklore.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 151

ENG 251 - Great British Writers I
This course studies significant British poetry and prose from Chaucer to the late 1700's. A number of themes, readings, and interpretive assignments are given.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 152

ENG 252 - Great British Writers II
This course surveys major British poetry and prose writers from the Romantic period to the present century. A number of readings, themes, and interpretive assignments are given.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 152

ENG 255 - Introduction to Creative Writing
This course focuses on the development of the creative process and ways to communicate that process. Students learn about the techniques involved in creative expression, study published examples of those techniques, and will apply the techniques to their writing. Students share their writing in a workshop format, practicing the skills of analysis and evaluation.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 151

ENG 263 - Great American Writers I
This course studies major American poetry and prose writers from Colonial American through the Romantic era. A number of reading, themes, and interpretive assignments are given.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 152

ENG 264 - Great American Writers II
Major American writers and poets from the middle of the nineteenth century through the middle of the twentieth century are studied. A number of readings, themes, and interpretive assignments are given.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 152

ENG 275 - World Literature I
Masterpieces of world literature from ancient times through the Middle Ages are studied. A number of readings, themes, and interpretive assignments are given.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 152

ENG 276 - World Literature II
This course studies masterpieces of world literature from the Renaissance into the twentieth century. A number of readings, themes, and interpretive assignments are given.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: ENG 152

FRE 150 - French I
This is the first of a three-part course. Mastery of elementary communication skills (vocabulary, grammar, idiomatic expressions, informational phrases, some cultural content) will be targeted through oral and written work, quizzes, daily preparation assignments, written homework, compositions, readings and aural comprehension.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

FRE 151 - French II
This is the second of a three-part course. Mastery of elementary communication skills will be targeted through oral and written work, quizzes, daily preparation assignments, written homework, compositions, readings and aural comprehension.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: FRE 150

FRE 152 - French III
This completes the three-part course. Mastery of elementary communication skills is targeted through oral and written work, quizzes, daily preparation assignments, written homework, compositions, readings and aural comprehension.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: FRE 151

GEL 101 - Marine Geology
A study of major topographical features of the ocean floor will be undertaken in this course. Included will be coverage of continental drift, sea floor spreading, plate tectonics, seismology, sedimentation, paleontology, mineralogy, and petrology as these pertain to the ocean.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

GEL 102 - Geology of the Oceans
This is an introductory course in marine geology. Recent discoveries concerning the ocean floor are discussed in this lecture course. Modern theories of plate tectonics and sea floor spreading are presented by lecture and film. Sediment samples, rocks and minerals collected on recent CFCC cruises are shown and discussed as they relate to the modern concepts of marine geology.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisite: None

GEO 150 - Introduction to Physical Geography
This course will cover maps and map projections and their uses as well as analysis of the spatial distribution and character of environmental elements, including climate, land forms, vegetation, and soils.
Course Hours Per Week: Class 4, Lab 4.
Quarter Hours Credit: 6.
Prerequisite: None

HIS 150 - Western Civilization I
This course traces the history of Western Civilization from it near Eastern, Grecian, and Roman origins through the Middle Ages. It concludes with coverage of the Renaissance and Reformation periods.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

HIS 151 - Western Civilization II
This course is a continuation of Western Civilization I. It begins with the Absolutism of the Seventeenth Century and covers the rise of constitutionalism, emerging industrialism and nationalism of the nineteenth century, and concludes with the development of modern day economic, cultural, and political life.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

HIS 250 - American History I
This is a survey course designed to cover the history of the United States from the pre-colonial period to Reconstruction in the aftermath of the Civil War. Emphasis is placed on the social, cultural, and economic developments of the republic.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

HIS 251 - American History II
This course is a continuation of American History I and is a survey of the history of the United States from the period of Reconstruction to the present with emphasis on the rise of the United States as a world power.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

HRM 101 - Introduction to the Hospitality Industry
This course provides a basic understanding of the lodging and food service industry by tracing the industry's growth and development, reviewing the organization of hotel and food and beverage operations, and by focusing on industry opportunities and future trends.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

HRM 102 - Tourism and the Hospitality Industry
This course is designed to provide students with a basic knowledge of tourism-related concepts and with the kind of practical experience which will enable them to effectively apply those concepts to the hospitality industry.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 101 or permission of instructor.

HRM 107 - Organization and Administration
This course analyzes management's functions and responsibilities in such areas as administration, organization, communications, accounting, marketing, and human relations.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

HRM 109 - Nutrition for Food Service
This course focuses on nutrition as it relates to personal health, foods and food preparation, menu planning and recipe modification and marketing of nutritious items in the food service industry.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

HRM 115 - Hospitality Energy and Water Management
Energy and water problems and their impact on the hospitality industry are explained. The course also provides a practical approach to the development and implementation of an energy and water management program.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 101 or permission of instructor.

HRM 120 - Hospitality Industry Training
This course uses real-life scenarios and case studies to prepare students to train hospitality personnel.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 101 or permission of instructor.

HRM 124 - Managerial Accounting for the Hospitality Industry
This course presents managerial accounting concepts and explains how they apply to specific operations within the hospitality industry.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: ACC 122

HRM 133 - Front Office Procedures
This course presents a systematic approach to front office procedures by detailing the flow of business through a hotel, beginning with the reservation process and ending with check-out and settlement. The course also examines the various elements of effective front office management, paying particular attention to planning and evaluating front office operations and to personnel management. Front office procedures and management are placed within the context of the overall operation of a hotel. Course includes computer applications.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: HRM 101 or permission of instructor

HRM 137 - Food and Beverage Management
A course providing a basic understanding of the principles of food production and service management, reviewing sanitation, menu planning, purchasing, storage, and beverage management including computer applications.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: HRM 101 or permission of instructor

HRM 138 - Food Production Principles
The techniques and procedures of quality and quantity food production are explained in this course. Principles underlying the selection, composition, and preparation of the major food products are included, as well as an extensive set of basic and complex recipes for practice.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: HRM 137 and HRM 143 or permission of instructor

HRM 143 - Basic Sanitation
The course outlines how to effectively manage sanitation to achieve high standards that will keep customers coming back.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 101 or permission of instructor

HRM 201 - Hotel/Motel Security Management
The issues surrounding the need for individualized security programs are explained. A wide variety of security and safety equipment and procedures are examined, guest protection and internal security for asset protection are discussed, and OSHA regulations that apply to lodging properties are outlined.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 101 or permission of instructor

HRM 202 - Convention Management and Service
This course defines the scope and segmentation of the convention and group business market, describes marketing and sales strategies to attract markets with specific needs, and explains techniques to meet those needs as part of meeting and convention service.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 222 or permission of instructor

HRM 203 - Hospitality Industry Engineering Systems
This course presents information and principles important to both the managerial and technical functioning of the engineering/maintenance department, stressing the knowledge needed by managers at all levels in order for them to make appropriate and cost-effective decisions.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 101 or permission of instructor

HRM 205 - Hospitality Law
This course gives students an introduction to the legal aspects of hotel and restaurant operations.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 101 or permission of instructor

HRM 222 - Marketing of Hospitality Services
This course is designed to provide students with basic knowledge and practical experience which will enable them to develop strategic marketing plans for hotel/motel properties.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 101 or permission of instructor

HRM 223 - Hotel/Motel Sales Promotion
Students will be provided with a solid background in hospitality sales and advertising. Although marketing concepts are also discussed, the emphasis is on practical sales techniques, proven approaches to selling to targeted markets, and advertising's role in sales.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: HRM 222 or permission of instructor

HRM 224 - Quality Control
This course introduces the student to problem solving skills that will enable the performance of quality assurance strategies for the particular challenges of quality control in the hospitality service industry.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: Completion of 15 hours of HRM courses or permission of the instructor

HRM 239 - Housekeeping Management
This course teaches students the basic principles of effective house keeping management.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

HRM 240 - Hospitality Human Resources Management
This course presents a systematic approach to human resources management in the hospitality industry.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

HRM 241 - Food and Beverage Controls
Principles and procedures involved in an effective food and beverage control system are covered. Also included are standards determination, the operating budget, income and cost control, menu pricing, and computer applications.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: HRM 137, BUS 135

HRM 243 - Hospitality Purchasing Management
This course describes how to develop and implement and effective purchasing program. It focuses on issues pertaining to supplier relations and selection, negotiation, and evaluation. It includes in-depth material regarding major categories of purchases.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: BUS 135, HRM 137

HRM 245 - Food and Beverage Service
This course provides students with practical skills and knowledge for effective management of food and beverage service in outlets ranging from cafeterias and coffee shops to room service, banquet areas, and high check-average dining rooms. Basic service principles are presented with an emphasis on the special needs of guests.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: HRM 137 and HRM 143 or permission of instructor

HRM 246 - Hospitality Management Problems
This course exposes the student to current issues in Hospitality Management, through industry professional resources such as periodicals and journals. The course will be conducted in a seminar format.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: Sophomore HRM standing or permission of instructor

HRM 248 - Hospitality Industry Computer Systems
This course provides an overview of the information needs of lodging properties and food service establishments. It addresses essential aspects of computer systems, such as hardware, software, and generic applications. Focus is on computer-based property management systems for both front office and back office functions and computer-based restaurant management systems for both service-oriented and management oriented functions.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: CAS 101 or permission of instructor

HYD 235 - Hydraulics and Pneumatics
This course is an engineering study of basic fluid power transmission systems. Topics covered include: flow measurement, pressure, flow control, types of actuators, power delivery, piping, pump types, energy storage in accumulators, and compressed air systems. Emphasis throughout the course is placed on the application of basic physics principles to the design of fluid power systems.
Course Hours Per Week: Class 3, M. Lab 3.
Quarter Hours Credit: 4.
Prerequisite: PHY 102 or PHY 105

ISC 101 - Industrial Safety
This course addresses safety as set forth by OSHA standards and its application to industry in general. The student will work with OSHA manuals and explore simulated safety violations and discuss possible solutions. The objective is for the student to become familiar with OSHA and general safety standards to the extent that they might reasonably interpret and execute them given the occasion.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

ISC 102 - Quality Control in Manufacturing
This course is designed to train the student in inspection methods which are consistent with a modern manufacturing facility. Inspection procedures ranging from basic measurement to statistical process control and geometric dimensioning and tolerancing will be studied thoroughly.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: MEC 105 or instructor's permission

ISC 202 - Quality Control and Statistics
This course is a study of the principles and techniques of quality control and cost savings; organization and procedure for efficient quality control; functions; responsibilities, structures, costs, reports, personnel, and vendor-customer relationships in quality control; sampling inspection, process control, and tests for significance.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

ISC 204 - Industrial Management
This course is a survey of the history of modern management and the various functions which the manager of a modern industrial enterprise must perform. It includes a study of the various departments that assist the manager in carrying out his responsibilities.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

LEX 101 - Introduction to Paralegalism
This course covers the objectives of the paralegal program, the legal vocabulary, the descriptions of various paralegal jobs, professional ethics, and professional organizations.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

LEX 104 - Investigations
Study of investigating criminal and civil cases, interviews, taking statements, collecting data, and the orderly assemblage for the attorney's use. This course includes locating and interviewing witnesses, including expert witnesses, investigating crime scene sketching, evaluating evidence and determining its sufficiency and admissibility.
N.C.G.S. Chapters 15-A and Chapter 1A-1 are discussed.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

LEX 111 - Legal Writing
Continuation of Legal Research and Bibliography course where paralegal student, having mastered basic techniques of legal research, now must utilize results of research in the form of legal writing. This course will emphasize those areas of legal writing where a paralegal may be called upon to employ. Students will work on legal memorandums, letter writing and brief writing.
Course Hours Per Week: Class 1, Lab 2.
Quarter Hours Credit: 2.
Prerequisite: LEX 132

LEX 113 - Family Law
The purpose of this course is to train paralegals to handle competently separations, divorces, annulments, adoptions, and bastardy proceedings from initial interview through data collection and drafting of instruments, giving notice, filing and serving documents, and setting hearing dates to final disposition.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

LEX 114 - Property I
This course is a study in ownership of interest in property, of land transfers, in whole and in part, absolute and conditional, present and future; of retained powers of ownership; and of the documents and procedures necessary to establish interest in land.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

LEX 115 - Commercial Law I
An introduction course for those majoring in the Paralegal Technology curriculum. The course will involve an introduction to the law, a discussion of the law of contracts, and business organizations. The course will include hands-on experience in drafting of contracts.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

LEX 116 - Commercial Law II
A continuation from Commercial Law I for paralegals with emphasis on the Uniform Commercial Code, personal property and bailment, and agency. The course will include exposure to commercial instruments other business documents.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: LEX 115

LEX 117 - Torts and Litigation Preparation
This course considers the broad problem of personal injury and disability and the legal response to that law. Negligence, strict liability, intentional torts, rules of civil procedure preparation, pleadings, motions, order, discovery materials and post-judgement remedies are covered in great detail.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

LEX 132 - Legal Research/Bibliography
This course introduces the student to the proper methods of utilizing legal research material. The student will study the preparation of legal memoranda and trial briefs. The course will introduce the student to the law library and how to select and order material for the library.
Course Hours Per Week: Class 4, Lab 6.
Quarter Hours Credit: 7.
Prerequisite: None

LEX 135 - Legal Systems
This course is a study of legal history; jurisdiction of state and federal courts; the acquisition of jurisdiction over parties and subject matter; venue; pleadings and related problems under the North Carolina and Federal Civil Rules of Procedure; real party in interest; splittings of actions; joinder of parties and causes of action; special joinder devices; and forms of pleadings and motions.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

LEX 205 - Constitutional Law
A case study course showing the development of the application of the Federal Constitution to both criminal and civil law and a historic development of Constitutional Law.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

LEX 208 - Administrative Law
This course involves study of various administrative agencies and procedures, including Social Security, Industrial Commission, Employment Security Commission and hearings and appeals from local boards.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

LEX 215 - Property II: Title Search
This course includes the study of: examination of title; preparing simple titles; and role of judgements and estates in the determination of marketability of real estate title; the study and function of various documents, indices and files on public records in various county offices. Forms for abstracting title information from public records, summaries thereof, and various typical problems and errors which may render a title unmarketable are included.
Course Hours Per Week: Class 1, Lab 4.
Quarter Hours Credit: 3.
Prerequisite: LEX 114

LEX 216 - Property III: Loan Closings
This is a continuation of Property II: Title Searching. The course addresses the preparation of closing document in connection with loans. The student is allowed hands-on experience in preparing and drafting all documents relating to conventional, VA, FHA, and other loans.
Course Hours Per Week: Class 1, Lab 2.
Quarter Hours Credit: 2.
Prerequisite: None

LEX 219 - Computerized Legal Research
This course is designed to advance the student's skill of legal research by use of the computer access terminal. Students will be taught methods, procedure and proper use of the computer as a research aid.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: LEX 132

LEX 224 - Wills
This course covers the probate and administration of wills and estates. The topics of study include the operation and revocation of wills, descent and distribution in case of intestacy, construction of trust agreements, and the transfer of estate assets.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

LEX 230 - Bankruptcy and Collection
This course will introduce the student to the Bankruptcy Law. The student will understand the operation of the bankruptcy court and will examine the techniques of debt collection and attachment.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

MAT 090 - Developmental Mathematics
This course is designed to provide the student with the fundamental concepts needed to undertake the mathematical sequences in the technical curricula. Topics include operations on whole numbers, prime numbers, multipliers and factors, powers and roots of whole numbers. Also included are operations on fractions and decimals, percentages, operations on the real number line, and geometry fundamentals.
Course Hours Per Week: Class 3.
Institutional Hours Credit: 3.
(Does not apply toward graduation)
Prerequisite: None

MAT 099 - Beginning Algebra
This course covers the fundamentals of high school Algebra I. It is designed to qualify a student for admission into curricula having high school Algebra I as an admission requirement. It is also recommended for those students wanting an Algebra I review in preparation for starting the technical mathematics sequence.
Course Hours Per Week: Class 5.
Institutional Hours Credit: 5.
(Does not apply toward graduation)
Prerequisite: None

MAT 100 - Intermediate Algebra
This course covers the fundamentals of Algebra II. It is designed as the developmental course for college algebra to sharpen the student's skills in algebra. It is also designed to provide an introduction to algebraic operations to students without a sufficient background in algebra. It is recommended for those students needing an algebra review in preparation for their respective mathematics courses in their program.
Course Hours Per Week: Class 5.
Institutional Hours Credit: 5.
(Does not apply toward graduation)
Prerequisite: Approved cutoff score in the Placement Test

MAT 104 - Machinist Mathematics I
This course is designed to acquaint the machinist with the mathematical tools most useful to the trade. The areas of Metric Measurement, Ratio and Proportion, Basic Trigonometry, and Fundamental Geometry are utilized in the light of practical machine trade problems.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 121

MAT 105 - Machinist Mathematics II
This is the second course of the sequence dealing mainly with practical machine shop trigonometry problems. Right angle trig applicable to calculating bolt circle hole locations, dovetail slot size dimensions, angular measurement with sine bar, and tapers on a lathe. The laws of sine and cosine will be covered so oblique triangles can be calculated. These math skills are essential on conventional machine tools as well as Computer Numerical Control tools, which use coordinate point locations to cut angles, chamfers and arcs.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 104

MAT 121 - Technical Mathematics
This introductory algebra course is the first in a three course sequence. The topics of study are operations with real numbers, introduction to exponents and radicals, operations with algebraic expressions, algebraic fractions, and solving first degree equations.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: Appropriate cutoff score on the admission testing requirement.

MAT 122 - Technical Mathematics
This course is the second in a three-course sequence. The topics of study are variation, graphing of functions, introduction to trigonometry and applications to right triangle solution, vectors, exponents and radicals, and exponential and logarithmic functions. Application of theses topics in technical areas of study will be stressed.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 121 or equivalent

MAT 123 - Technical Mathematics
This course is the third in a three-course sequence. The topics of study are systems of equations in quadratic equations, trigonometric graphs and polar coordinates, trigonometric formulas and equations, and solving oblique triangles.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 122 or equivalent

MAT 150 - College Mathematics I
A survey course designed to meet the basic studies requirement in mathematics. The purpose of the course is to describe the nature of mathematics through content not ordinarily encountered in the high school curriculum. The course is not intended as preparation for further mathematics courses other than MAT 151. Topics will be chosen from logic, number patterns and systems, algebra, geometry, probability, statistics, calculus, finance and the historical development of mathematics with emphasis being placed on problem solving and the application of these topics in today's society. Some topics will require students to do calculations using a scientific calculator.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: Entrance Test qualification in Reading and Mathematics.

MAT 151 - College Mathematics II
A continuation of the topics begun in Mathematics 150. Emphasis will be placed on how these topics are used in the real world. Topics will be chosen from among those listed in the description for MAT 150. Some topics will require students to do calculations using a scientific calculator.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 150

MAT 160 - College Algebra
A study of sets; linear, quadratic, polynomial, rational, exponential, and logarithmic functions; solution of equations and inequalities; permutations and combinations; the binomial theorem; and mathematical induction.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: Entrance Test qualification, or MAT 100

MAT 161 - College Trigonometry
A study of the definitions and interpretation of the trigonometric functions, including related concepts and applications. Topics include trigonometric identities, graphs of trigonometric functions and their inverse relations, trigonometric equations, triangle solution, vectors, and selected algebra topics.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 160

MAT 165 - Introduction to Statistics
An introductory study of statistical methods, including organization and presentation of data, probability, probability distributions, hypothesis testing, and confidence intervals. Emphasis will be on computational procedures and applications rather than theoretical development.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 160

MAT 190 - Precalculus
A comprehensive course in precalculus mathematics includes the fundamental concepts of real numbers and functions including polynomial and rational functions, exponential and logarithmic functions and trigonometric functions. Analytic trigonometry including trigonometric identities and equations are developed. Application of these concepts to practical situations is stressed.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 123 or equivalent

MAT 211 - Basic Statistics
This introductory course of statistics allows the student to identify and be able to work with statistical descriptions, probability distributions, special distributions, sampling distributions, estimations of population proportion, test concerning population proportions, inferences concerning population mean and additional topics selected from the following: inferences, concerning differences of two population means, inferences concerning population variances, Chi-square, regression and correlation, analysis of variance, nonparametric methods, survey sampling, quality control, Bayesian methods, and decision theory.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 122

MAT 212 - Industrial Statistics
This course a basic framework of statistical concepts for analyzing manufacturing and industrial processes. Topics include: Data collection, organization and presentation; calculation of central tendency; variation and probability in sampling; statistical process control and preparing and analyzing control charts for various quality characteristics. Emphasis is given to industrial quality control techniques and applications.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisite: MAT 122

MAT 250 - Calculus I
The fundamental concepts of analytic geometry, differential, and integral calculus are introduced. Topics included are graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, intergrals, and basic integration techniques. Application of these concepts to practical situations is stressed.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 161 or MAT 190

MAT 251 - Calculus II
A continuation of MAT 250. Topics included are applications of integration to velocity and acceleration problems, area between curves, volume, and work by a variable force. Also included are derivatives of trigonometric, inverse trigonometric, exponential and logarithmic functions, integration of exponential and logarithmic functions, techniques of integration by parts, and the use of tables of integrals. Emphasis is placed on application of these techniques to physical problems.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 250

MEC 103 - Machining Technology I
Students will be introduced to the history and job opportunities in the Machinist field. Identification and use of handtools and precision measuring instruments, along with processes and safety procedures on engine lathes, drill presses, milling machines and pedestal grinders will be included. Elementary layout procedures will also be covered.
Course Hours Per Week: Class 5, M. Lab 12.
Quarter Hours Credit: 9.
Prerequisite: None

MEC 104 - Machining Technology II
This course will deal with machining processes. Closer tolerances on class projects will require students to place more emphasis on quality. Precision layout and surface and cylindrical grinding will be introduced. The effects of workpiece and cutting tool materials in relation to cutting speeds, feeds, and surface finishes will be covered. Equipment nomenclature and safety will be included.
Course Hours Per Week: Class 3, M. Lab 15.
Quarter Hours Credit: 8.
Prerequisite: MEC 103 or permission of instructor

MEC 105 - Machining Technology III
Students will expand their knowledge of previously used machining and layout processes. Internal machining operations will be introduced. The production of screw threads and the calculations required will be covered. Angular machining on mills, lathes and grinding machines will be studied and practiced. Students will be introduced to Quality Control inspection, cutter grinder operations, gear cutting and calculations. Students will apply production machining while maintaining quality. Safety in the workplace will be stressed.
Course Hours Per Week: Class 3, M. Lab 15.
Quarter Hours Credit: 8.
Prerequisite: MEC 104 or permission of instructor

MEC 106 - Machining Technology IV
This course will cover the production of a class project from start to finish. Students will be required to use all previous information and knowledge. The project will start with detail and assembly drawings. Students will process and manufacture parts to specifications, inspect and assemble the project. Emphasis will be placed on accuracy, workforce participation and trouble shooting. Safety procedures will be observed at all times. Heat treating of steel and steel alloys and its effects on tolerances and stock allowances will be covered.
Course Hours Per Week: Class 3, M. Lab 15.
Quarter Hours Credit: 8.
Prerequisite: MEC 105 or permission of instructor

MEC 107 - Machining Center Programming and Operation
This is a course of study designed to train the student in the manual programming methods of modern Computer Numerical Control (CNC) machining centers. The history and types of numerical control machine tools, as well as the programming, setup and operation of modern CNC machining centers will be thoroughly studied. Manual programming utilizing standard "G" and "M" code programming formats (RS274D format) will be emphasized. This course is taught with a "hands on" perspective allowing the student to gain actual experience on " the machine".
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: MEC 104 or permission of instructor

MEC 108 - Turning Center Programming and Operation
This is a course of study designed to train the student in the manual programming, set up, and operation methods of a Computer Numerical Controlled (CNC) turning center. Students will learn procedures necessary to manufacture parts beginning with a blueprint, writing a computer program using standard RS274D programming format, machine tool setup, and final part and program debugging. Methods employed are consistent with modern industry and is taught from a "hands on" perspective.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: MEC 107 or permission of instructor

MEC 121 - Industrial Methods I
Students will be introduced to basic shop hand tools and instructed in their proper use and care. The drill press and its accessories will be demonstrated and the student will be required to complete shop projects as assigned by the instructor. Safety will be stressed throughout the course.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: None

MEC 122 - Industrial Methods II
The lathe, milling machine, and all accessory tools will be introduced to the student. Emphasis will be placed on the machine's limits and abilities. Safety rules will be stressed for each machine. Appropriate projects will be assigned by the instructor.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: MEC 121

MEC 123 - Introduction to CAD-CAM
Students will study simple part programs for Computerized Numerical Controlled (CNC) machine tools, and will be introduced to Computer Aided Design and Computer Aided Manufacturing (CAD-CAM) as used in industry.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: MEC 122

MEC 201 - Machining Technology V
This course will deal with advanced grinding processes and metallurgy. Internal grinding requiring students to form dress abrasive wheels will be introduced. The selection and identification of steel, steel alloys and nonferrous materials used in manufacturing, along with their properties and strengths, will be emphasized. Expanded studies of heat treatments and hardness measuring instruments that will be covered.
Course Hours Per Week: Class 1, M. Lab 9.
Quarter Hours Credit: 4.
Prerequisite: MEC 106 or permission of instructor

MEC 202 - Advanced Turning Center Programming and Operation
This course will concentrate on advanced programming and operation of modern turning centers. Complex part programs using standard RS274D format will be studied in depth. Internal threading, external threading, multiple repetitive cycles and circular interpolation are some of the programming techniques that will be covered. Various operational techniques will be included.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: MEC 108 or permission of instructor

MEC 203 - Advanced Machining Center Programming and Operation
This course concentrates on advanced programming techniques for Computer Numerical Control (CNC) milling operations. Complex multipart programs will be developed using standard RS274D format code. Helical interpolation, mirror image, cutter compensation and zero shift are some of the programming topics that will be included. Auxiliary functions and feed functions will be studied in depth.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: MEC 107 or permission of instructor

MEC 204 - Jigs and Fixtures I
This course is a study in the fundamental principles and uses of jigs and fixtures. The various types of jigs and fixtures and their identification will be studied. Processes of designing and manufacturing simple jigs and fixtures will also be covered.
Course Hours Per Week: Class 2, M. Lab 9.
Quarter Hours Credit: 5.
Prerequisite: MEC 106 or permission of instructor

MEC 205 - Strength of Materials
This course is a continuation of PHY 106, Applied Mechanics. It is the study of stress and strain as they relate to structural design. The areas of force analysis of structures, friction, equilibrium, stress, and strain are covered in as much detail as time will permit.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: MAT 123, PHY 106

MEC 206 - Computer Aided Manufacturing I
This course is a study of computer aided manufacturing using the latest in microcomputer technology. Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) software will be linked together to generate the numerical code necessary to machine complex parts on CNC machine tools. Each student will utilize the CAD/CAM system to manufacture a variety of parts on CNC turning centers and CNC milling machines. Complete documentation of each job setup and related materials is required.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: MEC 106

MEC 207 - Manufacturing Processes
The newer concepts of work handling, automatic machining processes, chipless production, new techniques in metal forming, analysis of high-energy forming, ultrasonic machining, electrolytic metal removal, chemical milling, numerical control system, and production methods in manufacturing are covered.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: MEC 123

MEC 208 - Computer Aided Manufacturing II
This course is a continuation of MEC 206 in which advanced CAD/CAM technology will be introduced. Complex parts will be manufactured in an industrial production environment with emphasis placed on cycle time and profitability of the machining process.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: MEC 206

MEC 209 - Introduction to Metallurgy
This is an introductory course which will describe the properties of ferrous and nonferrous metals as they apply to industrial applications. Metallurgical theory and practice will be studied to include the physical structure and composition of steel, the making, shaping, and treatment of steel and alloy steel as well as alloys of the common nonferrous metals to include light metals, copper, nickel and the refractory metals.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

MEC 210 - Jigs and Fixtures II
Students will put into practice the theory that was emphasized in Jigs and Fixtures I. Emphasis will be placed on the manufacture of jigs and fixtures to precise tolerances in the most economical manner possible.
Course Hours Per Week: Class 2, M. Lab 9.
Quarter Hours Credit: 5.
Prerequisite: MEC 204

MEC 216 - Industrial Materials
Proper knowledge of all types of industrial materials is essential to successful decision-making and problem-solving. This introductory course investigates the basic materials in industry. Electrical and physical properties of materials, mechanical characteristics of materials, water and steam, industrial gases, ceramic materials, cements and concretes, and metals are studied.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

MEC 220 - Computer Integrated Manufacturing
This course is intended to be an introduction to Computer Integrated Manufacturing. CIM technology is covered in terms of hardware, components, data structures, programming and other individual tools used in the CIM environment. CIM will be viewed as a management philosophy.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: ATR 201, CAS 106

MKT 232 - Sales Development
This course is a study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations is required.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

MKT 239 - Marketing
This course presents the marketing structure within the framework of the U.S. economic system. The course includes the movement of goods from producer to consumer through channels of distribution, pricing strategies, consumer behavior and market segmentation.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

MSC 101 - Navigation I
This course introduces students to basic marine piloting techniques using charts, navigational aids, buoys, markers, rules of the road, light and signals.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

MSC 102 - Navigation II
This is a continuation of MSC 101 introducing students to navigational publications and electronic navigational aids. Proper use of electronic equipment (radar, loran, and the gyrocompass) will be stressed. As time permits, classroom instruction may include tides, tidal current effects, danger angles, and soundings.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: MSC 101

MSC 103-107 - Ocean Survey
These courses are conducted aboard ship for periods of up to two weeks. Credit in all five is required for graduation. Students will practice sampling and measuring techniques, and conduct observations during assigned watches. Should circumstances make it impossible to conduct the training aboard ship, training will be conducted aboard small craft or in the field and students will receive credit for a Marine Project course, which will still apply towards graduation.

MSC 103-104
Course Hours Per Week: 6 M. Lab.
Quarter Hours Credit: 2.
Corequisite: 12 credit hours minimum enrollment in other Marine Technology courses, or approval of Marine Technology Chair.

MSC 105-106
Course Hours Per Week: 6 M. Lab.
Quarter Hours Credit: 2.
Prerequisite: Successful completion of all Marine Technology major courses thorough the quarter preceding the one in which this cruise is offered, or approval of Marine Technology Chair.
Corequisite: 12 credit hours minimum enrollment in other Marine Technology courses, or approval of Marine Technology Chair.

MSC 107
Course Hours Per Week: 6 M. Lab.
Quarter Hours Credit: 2.
Prerequisite: Successful completion of all Marine Technology major courses thorough the seventh quarter, or approval of the Marine Technology Chair.
Corequisite: 12 credit hours minimum enrollment in other Marine Technology courses, or approval of Marine Technology Chair.

MSC 108 - Oceanographic Instrumentation
Oceanographic Instrumentation will be introduced via lecture, demonstration, and student operation. Emphasis will be placed on the use, maintenance, calibration, and repair of general survey instruments.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

MSC 109 - Oceanography I
This course provides students with a general description of the oceans, their geography, geology, chemistry, and physics.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

MSC 110 - Oceanography II
This course provides students with a general description of air-sea interactions, wave, tide and ocean current phenomena, and coastal dynamics.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

MSC 111 - Net Construction Methods
This course introduces students to all types of fish-catching methods available to the commercial and scientific fisherman. Students will be instructed to the basic aspects of rigging, rope splicing, various practical knots, and the kinds of hardware used in biological sampling operations. The basics of biological net construction and repair also will be covered.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

MSC 112 - Biological Net Construction I
This course offers students further instruction and practical experience in the mending and patching of various types of gear as well as additional experience in various aspects of marlinspike seamanship. Students will receive instruction on the various types of webbing available as well as construction techniques for various types of entrapment and entanglement gear. Ordering, sizing, and practical applications of all gear constructed will be explained.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

MSC 113 - Biological Net Construction II
This course offers students further instruction in the design and construction of some of the more complex sampling gear, including biological seines, trawls, and cast nets. Taper cuts and sewing techniques will be introduced as well as computer-assisted design of various equipment. Practical applications of all gear constructed will be explained.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: MSC 112

MSC 114 - Biological Sampling Methods
This course offers students further experience utilizing all the various skills and techniques taught in the prerequisite courses. This course will also include the proper care and maintenance of all equipment used, the proper recording of all biological data as well as theories and uses involved in the compilation of raw biological data.
Course Hours Per Week: Lab 4.
Quarter Hours Credit: 2.
Prerequisite: MSC 113

MSC 117 - Practical Experience I
This course offers students an introduction to various measuring devices and their uses, various hand and hand power tools and their uses, as well as experience in the basic design, construction, and maintenance of marine related materials.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: None

MSC 118 - Practical Experience II
This course introduces students to various stationary power tools and their uses. Further experience will be gained with the use of hand and portable power tools, as well as the basic design, construction, and maintenance of marine-related equipment.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: MSC 117

MSC 119 - Practical Experience III
This course offers students practical experience in the photographic recording of data as it relates to past biological, chemical, and instrumentation studies.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: PHO 110

MSC 131 - Marine Biology
Marine and estuarine habitats and organisms will be examined in this course. An ecological approach to the study of organisms in the local marine communities will be taken.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

MSC 132 - Power Boat Operations and Seamanship
This course introduces students to the various aspects of safe, skillful, and seamanlike operation of power boats. Students will operate and practice docking small craft. It also introduces students to the various skills, duties, and nomenclature required of able-bodied seamen.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

MSC 133 - Marine Invertebrate Zoology
Taxonomy and classification of marine invertebrate animals will be studied in this course. Preserved animals will be utilized for learning the taxonomic relationships between various marine invertebrates. Laboratory periods will be used to study some of the behavioral characteristics of selected animals.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

MSC 135 - Aquarium Systems
This is a laboratory oriented course emphasizing the proper techniques of setting up marine aquaria and maintaining healthy marine animals in a closed seawater system.
Course Hours Per Week: Class 1, Lab 2.
Quarter Hours Credit: 2.
Prerequisite: None

MSC 141, 142, 143 - Marine Projects
Students will participate in a marine project that may or may not require training aboard a small craft, but will require participation in field work or tours related to knowledge gained in regular classes.
Course Hours Per Course: 33 Hours.
Quarter Hours Credit: 1.
Corequisite: 12 credit hours minimum enrollment in other Marine Technology curriculum courses.

MSC 202 - Data Processing I
This course introduces students to the handling and processing of oceanographic data. Temperature, salinity, and depth data are used to demonstrate standard methods of recording and reducing oceanographic data.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

MSC 205 - Data Processing II
This course is a continuation of MSC 202 and will emphasize computer application in the collection, handling, reduction, and display of oceanographic temperature, salinity, and depth data.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisites: CAS 106, MSC 202 or permission of instructor

MSC 206 - Estuarine Survey
A course in which emphasis is placed on field sampling and measurements, laboratory analysis, data reduction, and data representation. This course is designed to provide an opportunity for soon-to-be-graduating students to apply in a comprehensive, challenging, and significant manner what has been learned during the past seven quarters. A formal report will be required.
Course Hours Per Week: Class 2, Lab 4, M. Lab 3.
Quarter Hours Credit: 5.
Prerequisites: CHM 109, CHM 224, MSC 108

MSC 213 - Marine Vertebrate Zoology
Identification, classification, and natural history of marine vertebrates are the studies in this course.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

MUS 150 - Survey of Music Literature
This course is designed to increase the student's knowledge and appreciation of music. The development of listening skills is emphasized. A technical knowledge of music is not required.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

MUS 151 - Introduction to Music History I
This course traces the history of music from the Middle Ages through the Baroque Period and is designed to explain style development in relationship to historical influences. Historical and social occurrences are directly linked to the changes in musical style.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

MUS 152 - Introduction to Music History II
This course is an overview of music history and literature of the Classic, Romantic, and Contemporary periods from 1750 to the present. The relationship between musical development and historical and social events is stressed.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

MUS 153 - Music in America
This course covers American music history from the Pilgrims to the present, including folk, religious, and popular styles as well as art music. Technical knowledge of music is not required.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

NUR 101 - Fundamentals of Nursing
Nursing 101 introduces the student to cognitive, psychomotor, and affective skills necessary to make sound nursing decisions and practice competently. Beginning knowledge of the nurses role as a member within the profession is addressed. The nursing process is introduced as a systematic method of managing nursing care. Psychosocial and physiological concepts basic to a humanistic and caring application of scientific principles are included.
Course Hours Per Week: Class 4, Lab 6.
Quarter Hours Credit: 7.
Prerequisite: Acceptance into the ADN program
Corequisites: BIO 250, PSY 150 (may be taken at a prior time)

NUR 102 - Common Stressors in Health Nursing
Nursing 102 utilizes the nursing process as a tool to assist students in acquiring knowledge essential in providing care to patients experiencing common health stressors. The nurses role as a member of the profession is stressed in accurate reporting and recording. The nursing management of safe, accurate medication administration is emphasized and physical assessment skills are introduced. The student is provided the opportunity for humanistic and caring application of scientific principles in varied clinical agencies.
Course Hours Per Week: Class 4, Lab 2, Clinical 12.
Quarter Hours Credit: 9.
Prerequisites: NUR 101, BIO 250
Corequisite: BIO 251

NUR 103 - Nursing Care of Adults I
Nursing 103 emphasizes the nursing process as an organizing framework to provide nursing care for patients experiencing common and/or chronic health deviations. Students are provided opportunities in affiliating agencies to demonstrate understanding of accountable management, in prioritizing,

and organizing nursing care. Opportunities for professional growth, continuous learning and self-development are provided.
Course Hours Per Week: Class 6, Clinical 12.
Quarter Hours Credit: 10.
Prerequisites: NUR 102, BIO 251
Corequisite: BIO 252

NUR 104 - Maternal-Child Nursing
Nursing 104 is designed as a two part course which utilizes the nursing process to assist the student in providing care for maternal, newborn, and pediatric patients. The student is expected to organize care and demonstrate accountable management of one or two patients through a collaborative process. Opportunities are provided for continued development as a member within the discipline of nursing. Clinical experiences are provided in acute community based settings. The student must pass the Maternal and Pediatric components of the course separately in order to pass the course.
Course Hours Per Week: Class 8, Clinical 6.
Quarter Hours Credit: 10.
Prerequisites: NUR 103, PSY 250, PSY 252, NUR 120 for the LPN student

NUR 105 - Nursing Issues and Trends
Nursing 105 is designed to assist the student in examining the role of the Associate Degree Nurse as a member within the Discipline of Nursing. The course addresses nursing education and continuous learning, self-development, ethical standards, legalities, professional organizations, political and economic forces, and historical and current trends.
Course Hours Per Week: Class 2.
Quarter Hours Credit: 2.
Prerequisite: None

NUR 120 - Nursing Transition
Nursing Transition provides an orientation to the conceptual framework of the Associate Degree Nursing Program. It is designed for the Licensed Practical Nurse entering the ADN program with advanced standing. The course emphasis is on concepts basic to nursing, common stressors in medical-surgical nursing, basic physical assessment skills, and pathophysiological processes with related nursing interventions for common problems in the respiratory, cardiovascular, reproductive, GI, and immune systems and diabetes mellitus. Clinical experience will focus on the utilization of the nursing process on medical-surgical floors in local hospitals.
Course Hours Per Week: Class 6, Lab 2, Clinical 3.
Quarter Hours Credit: 8.
Prerequisites: BIO 250, BIO 251, PSY 150, PSY 250, Current unrestricted license as a LPN
Corequisite: BIO 252

NUR 201 - Psychiatric Nursing
Nursing 201 utilizes the nursing process as a tool to assist the student to gain current knowledge in providing care to individuals experiencing alterations in social and psychological functioning. The student must coordinate patient care as the patients interact with their families, groups, and/or communities. Opportunities for professional growth, continuous learning, and self-development are incorporated into the course. Clinical experiences are scheduled in both inpatient and community based settings.
Course Hours Per Week: Class 4, Clinical 6.
Quarter Hours Credit: 6.
Prerequisite: PSY 250, NUR 104

NUR 202 - Patient Care Management
Patient Care Management addresses concepts of leadership and management necessary to provide and coordinate care for a group of patients. Principles of communication, delegation, conflict resolution, and roles and responsibilities of Nursing Personnel.
Course Hours Per Week: Class 1.
Quarter Hours Credit: 1.
Prerequisite: None

NUR 203 - Nursing Care of Adults II
In Nursing 203 the nursing process is utilized as the basis for providing patient-centered care through a collaborative approach involving the patient, family, significant others, and the health care team. The role of manager of care is emphasized and students are provided opportunities to organize, prioritize, and delegate accountable care for groups of patients experiencing common alterations in health. Clinical experiences include acute care and community based settings.
Course Hours Per Week: Class 6, Clinical 12.
Quarter Hours Credit: 10.
Prerequisites: NUR 201, NUR 202

NUR 204 - Nursing Care of Adults III
Nursing 204 utilizes the nursing process to guide the student in providing and managing care for adult patients experiencing more complex common health deviations. Clinical experiences are structured to facilitate the transition from the role of the student to the role of a practicing member within the discipline of nursing. Experiences are provided in Acute, Ambulatory, and Home Health.
Course Hours Per Week: Class 6, Clinical 12.
Quarter Hours Credit: 10.
Prerequisite: NUR 203

ORI 150 - Seminar: Lifelong Learning
This course is designed to empower students with the capability to develop their own successful college experience by helping them to become more proficient learners; to utilize available campus resources; to experience both campus and community enrichment activities; to foster a better understanding of self, diverse college population and future career goals through a multicultural component and a career component.
Course Hours Per Week: 5.
Quarter Hours Credit: 5.
Prerequisite: None

OSC 100 - Basic Keyboarding
This is an introduction to keyboarding with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. A minimum speed requirement is 20 gross words a minute with 5 errors allowed.
Course Hours Per Week: Class 1, Lab 2.
Quarter Hours Credit: 2.
Prerequisite: None

OSC 105 - Keyboarding
This course is an introduction to keyboarding with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. The minimum speed requirement is 20 gross words a minute with 5 errors allowed.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

OSC 118 - Document Production
Instruction emphasizes the development of speed and accuracy with further mastery of correct techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Minimum speed requirement is 30 gross words a minute with 5 errors allowed.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: OSC 105 or equivalent

OSC 119 - Advanced Document Production
Emphasis is placed on straight-copy speed improvement, accuracy, and proofreading skills. Students learn the techniques needed in planning and in keyboarding units that closely resemble the work appropriate to the field of study. These units include a review of letter styles, tabulations, manuscripts, memorandums, and reports.
Course Hours Per Week: Class 3, Lab. 2.
Quarter Hours Credit: 4.
Prerequisite: OSC 118

OSC 120 - Administrative Office Applications I
Simulated office assignments will be given in order to develop proficiency in completing technical projects in an electronic office. Speed and accuracy will be stressed as well as these areas: organizing materials, working under pressure, making decisions, setting priorities, communication skills, and human relations.
Course Hours Per Week: Class 1, Lab. 2.
Quarter Hours Credit: 2.
Prerequisite: OSC 119

OSC 121 - Administrative Office Applications II
Opportunities for students to acquire the skills and knowledge for professional certification will be provided. Students will take several kinds of proficiency tests for professional office employment. Students will be given an opportunity to earn professional certification as Administrative Office professionals.
Course Hours Per Week: Class 1, Lab. 2.
Quarter Hours Credit: 2.
Prerequisite: OSC 120

OSC 200 - Information Management
Information management is designed to provide training in the area of records preparation, storage, and control. Students will perform manual and database filing exercises. Fundamental rules of alphabetic indexing and the four basic filing systems will be emphasized.
Course Hours Per Week: Class 3, Lab. 2.
Quarter Hours Credit: 4.
Prerequisite: CAS 109

OSC 213 - Office Procedures
Dictaphones, electronic calculators, copying machines, and similar modern office equipment are utilized by students to efficiently produce quality office documents such as letters, memos, payrolls, invoices, manuscripts, and statistical charts in a simulated office situation.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisites: CAS 101, CAS 125

OSC 217 - Comprehensive Speedwriting
An introduction to an alphabetic shorthand system in which sounds are represented by letters of the alphabet and common punctuation marks. Emphasis is placed on the theory of non-shorthand elements of dictation and transcription.
Course Hours Per Week: Class 3, Lab 4.
Quarter Hours Credit: 5.
Prerequisite: None

OSC 240 - Comprehensive Machine Transcription
Students develop skill typing mailable letter, memoranda, and manuscripts directly from records disks. Emphasis is placed on vocabulary development.
Course Hours Per Week: Class 3, Lab 4.
Quarter Hours Credit: 5.
Prerequisites: OSC 118, CAS 125

PED 150 - Foundations of Physical Activity
A study of immediate and long-term effects of physical activity and the establishment of individualized programs for acquiring and maintaining physical fitness.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

PHI 150 - Introduction to Philosophy
An introduction to basic philosophical concepts and issues with emphasis on major philosophers and perspectives.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

PHI 160 - Introduction to Ethics
An examination of major philosophical approaches to ethical theory and moral decision making with a balance between theory and applied ethics.
College Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

PHM 100 - Pharmacology
Upon satisfactory completion of the tasks for Pharmacology the student will demonstrate knowledge of the basic concepts of pharmacology with special emphasis on their relationship to disease processes, body systems and medical specialties and subspecialities. Explains adverse effects of various medications and the intrinsic and extrinsic factors affecting drug action in the body. Defines appropriate terminology and abbreviations relative to medication, drug responses and health information documentation. Identifies general physiologic actions and uses of common pharmacological agents. Discusses various pharmacological preparations of medications. Differentiates various dosage forms, sources, classification of drugs and drug dependencies. Introduces available resources for pharmacological reference. Incorporates legal concepts relative to medication and appropriate documentation. Emphasizes pharmacological impact on the health care industry.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: BIO 124

PHO 110 - Introduction to Photography
This course is an introductory course covering the basic skills required for black and white photography, the operation of the camera, the creation and content of a good photograph, processing film, making prints, and preparing photographs for display.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

PHO 150 - Introduction to Photography
This course is an introductory course covering the basic skills of black and white photography, the operation of the camera, the creation and content of a good photograph, processing film, making prints, and preparing photographs for display.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

PHY 100 - Introductory Physics
This is a fundamental course that forms a sufficient basic background for a student to progress into PHY 103, PHY 104, PHY 105, or PHY 106. The student will be introduced to the units used in measurement, and to the concepts of force, work, and power as they can be applied to linear motion. Emphasis is on the universal applicability of these concepts to other more specialized area of physics. This course enables students in certain technical curricula to take the more advanced physic courses with a single prerequisite course.
Course Hours Per Week: Class 4, Lab 2.
Quarter Hours Credit: 5.
Prerequisite: MAT 121 with a grade of C or better

PHY 103 - Physics: Electricity
This course is an introduction to the physical principles of electrical phenomena. Topics discussed include electrostatics, electric current flow and Ohm's law, magnetism and forces caused by electric currents, induced electric currents, alternating current devices, and simple electronic DC power supply circuits.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: PHY 100 or Phy 102, and MAT 122 with a grade of C or better

PHY 104 - Physics: Light and Sound
This course is an introduction to the description of optical and acoustic devices. Topics included are wave motion and resonance, sound measurements and human hearing, the Doppler effect, illumination and color, optical elements (lenses and mirrors), and some basic principles of physical optics.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: PHY 100 or PHY 102, and MAT 122 with a grade of C or better

PHY 105 - Physics: Heat and Fluids
This course is an introduction to heat energy and its effects on various materials. The course content is designed to provide the fundamental concepts necessary to describe heat transfer processes involving moving fluids. Topics included are pressure in liquids, laminar and turbulent flow of fluids, Bernoulli's principle, the ideal gas law, temperature and heat energy, and heat transfer via moving fluids.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: PHY 100 or PHY 102, and MAT 122 with a grade of C or better

PHY 106 - Applied Mechanics
This course is an introduction to statics. Some topics included are the equilibrium of two and three dimensional force systems, centroid and center of gravity, and the analysis of trusses and frames.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: PHY 100 or PHY 102, and MAT 123 with a grade of C or better

PHY 150 - College Physics I
A general college physics course designed to meet the needs of students working toward a Bachelor's Degree in Arts and Science. The course covers the principles and practical applications of Mechanics. Topics include: scalars and vectors, linear motion, Newton's laws, work, energy, power, momentum, torques, rotational dynamics and equilibrium. The student will develop basic skills of scientific experimentation including manipulation of apparatus and recording and analyzing data.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: MAT 161 with a grade of C or better

PHY 151 - College Physics II
A continuation of College Physics I. The course covers the principles and applications of Heat, Sound, and Optics. Topics include thermal energy, temperature, heat transfer, gases, fluid statics, fluid dynamics, elastic properties of solids, waves, reflection and refraction, optical instruments and wave interference.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: PHY 150 with a grade of C or better

PHY 152 - College Physics III
A continuation of PHY 150 and PHY 151. The course covers the principles and applications of Electricity and Magnetism. Topics include electric force, electric energy, electric current and Ohm's laws. DC circuits, capacitors, magnetic forces and fields, induced voltages and AC circuits. The course also covers modern physics.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: PHY 151 with a grade of C or better, or PHY 150 with a grade of C or better and instructor's consent

PME 101 - Marine Engines I
This is a course that introduces students to the basic construction of internal combustion engines of the reciprocating type. Basic maintenance and repair of related equipment including starters, water pumps, and generators will be covered. Outboard motors will be the primary type of engine studied in this course.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

PME 102 - Marine Engines II
This course is a continuation of PME 101. Theory of operation, breakdown and overhaul of small engines, water pumps, and accessories will be emphasized. Maintenance on all school inboard and outboard engines will be conducted as an integral part of the course.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: PME 101

POL 150 - American National Government
This course is designed to cover the origin, development, organization, functions, powers, policies, and programs of the federal government with emphasis on the three branches of government and how they interact with one another, with political parties, interest groups, and the electorate in political decision-making.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

POL 250 - American State and Local Government
This course is designed to analyze the relationship between federal government and state and local governments. It covers the organization, functions, legal procedures, and political processes at state and local levels.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

PSY 102 - Introduction to Psychology
This is a course designed to cover the basic principles of psychology that will be of assistance to the student in developing greater self-understanding and in improving interpersonal relationships on both individual and job-related bases. The content of the course includes the following: basic terminology; methods of gathering psychological data; psychology as a science; current schools of thought; learning theory and memory; personality development; stress and adjustment; and abnormal behavior.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

PSY 150 - Introduction to Psychology
This course is designed to cover the basic principles of psychology with emphasis on terminology, psychological research methods, theoretical schools, learning theory, physiological bases of behavior, mental health and adjustment, motivation, perception, and personality theory.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

PSY 250 - Human Growth and Development
A survey course covering the entire life span with emphasis on the physical, psychological, cognitive, and social development of the individual.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: PSY 150

PSY 298 - Abnormal Psychology
This course provides descriptions of various psychological disorders, presents historical and theoretical perspectives, explores diagnostic techniques and research methods, and identifies approaches to treatment.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: PSY 150

RAD 100 - Introduction and Patient Care
This course is designed to acquaint the student with the profession of Radiologic Technology and to prepare them for the clinical components of the program. The rules and philosophies of the Radiography Program, radiology departments, and profession are discussed in detail. Other topics presented include the history of the profession, ethics, career advancement, and professional organizations. Issues such as certification. Licensure, and professional development are also discussed. The basics of radiation safety will be emphasized.
Course Hours Per Week: Class 2.
Quarter Hours Credit: 2.
Prerequisite: None

RAD 101 - Medical Terminology
This course is designed to help the student develop a medical vocabulary. Combining forms, roots, prefixes, suffixes, plurals, abbreviations, specialty terms, and medical symbols will be studied. The student will learn to interpret radiographic requests and diagnostic reports. Terms specific to radiology will be emphasized.
Course Hours Per Week: Class 1.
Quarter Hours Credit: 1.
Prerequisite: None

RAD 102 - Patient Care in Radiology
An introduction to the care of patients in the radiology department. Students will learn about the patient-technologist relationship, the physical and emotional needs of the patient, giving physical assistance to the patient, working with sterile items, protecting patients and themselves from injury and the acquisition of diseases, and the administration of radiographic contrast media. Patient rights will be considered and an overview of the common drugs used in the radiology department will be given.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: CPR Certification (AHA Course B or equivalent) within the previous three (3) months.

RAD 103 - X-Ray Physics and Equipment
Application of the principles of physics to the operation and maintenance of x-ray equipment. Emphasis will be placed on atomic structure, electricity, and electromagnetism and how they relate to the design and function of x-ray circuits and equipment. The student will study typical circuits and the functional characteristics of single phase, three phase, capacitive discharge, and mobile x-ray equipment.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisite: MAT 121 (or concurrent)

RAD 104 - Radiographic Procedures I
This course presents and introduction to the basic principles and terminology of radiographic positioning. The student will learn the positions necessary for radiography of the chest, abdomen, and appendicular skeleton along with the related radiographic anatomy. Students will observe, practice, and be evaluated according to a competency-based system in the laboratory and classroom.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: BIO 250 (or concurrent)

RAD 105 - Radiographic Procedures II
This course is a continuation of RAD 104. Emphasis will be placed on the positioning techniques necessary to visualize the appendicular and axial skeleton. Procedures for the urinary and digestive system requiring contrast media will be studied and the related radiographic anatomy will be presented. Students will observe, practice, and be evaluated according to a competency-based system in the laboratory and classroom.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisites: RAD 104

RAD 106 - Radiographic Procedures II
This course is a continuation of RAD 105. The student will finish examinations using contrast media and study radiography of the cranium including the skull and facial structures. Radiographic anatomy is also studied. Students will observe, practice, and be evaluated according to a competency-based system in the laboratory and classroom.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisites: RAD 105

RAD 107 - Principles of Radiation Production & Control
Study of types, productin, and characteristics of radiation. The student will look at the structure and characteristics of x-ray tubes, the processes involved in the production of radiation, and the interactions of radiation with matter. Control of the quantity and quality of radiation will be covered and radiation detecting devices will be explained. The behavior of waves and particles will be introduced.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: RAD 103

RAD 108 - Radiographic Image Production
Study of the structure and characteristics of radiographic film , intensifying screens, cassettes, and processing equipment. The formation of the radiographic latent image and its subsequent chemical development into a visible image will be emphasized. Sensitometry will be used to study film characteristics.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisites: RAD 103 and RAD 107

RAD 109 - Clinical Orientation
This clinical course introduces the student to the radiology department by rotations through each of the diagnostic and ancillary areas. The student is expected to become familiar with operating x-ray equipment and to observe radiographic examinations under the direct supervision of a registered radiographer. Clinical competency evaluations will be conducted on equipment operation and may be requested on chest, abdomen, and appendicular skeleton.
Course Hours Per Week: Clinical 6.
Quarter Hours Credit: 2.
Prerequisite: Concurrent enrollment in RAD 104

RAD 110 - Clinical Education I
Practical experience in a hospital or physicians office setting that will enable the student to apply theory presented and to practice radiographic equipment manipulation, routine radiographic positioning, and patient care techniques. Competency evaluation of the chest, abdomen, and appendicular and axial skeletons will continue and students may request evaluation for contrast examinations of the urinary and digestive systems. The student will be under both direct and indirect supervision depending on the level of competency achieved.
Course Hours Per Week: Clinical 12.
Quarter Hours Credit: 4.

RAD 111 - Clinical Education II
This course is a continuation of RAD 109. Selected experiences in a clinical setting will provide the student with the opportunity to continue practice in radiographic equipment manipulation, radiographic positioning, and patient care techniques. Competency evaluation continues and the student may request evaluation on examinations of the cranium. Students continue to be under both direct and indirect supervision.
Course Hours Per Week: Clinical 12.
Quarter Hours Credit: 4.
Prerequisite: RAD 110 and concurrent enrollment in RAD 106

RAD 112 - Clinical Education III
The emphasis of this course is on the clinical application of all radiographic procedures presented in previous courses. Students will have expanded responsibilities in the clinical area while continuing competency evaluation under both direct and indirect supervision.
Course Hours Per Week: Clinical 15.
Quarter Hours Credit: 5.
Prerequisite: RAD 111

RAD 201 - Radiologic Technique
Study of the factors affecting exposure to the radiographic image receptor. Analysis of image quality and the structure and function of the accessory equipment used in radiography will be discussed. Radiographic density, radiographic contrast, recorded detail, and distortion will be considered along with the technical factors which control and affect each. Technique systems will be introduced and laboratory exercises will be utilized to reinforce concepts studied.
Course Hours Per Week: Class 3, Lab 4.
Quarter Hours Credit: 5.
Prerequisites: RAD 103 and RAD 107

RAD 202 - Radiologic Imaging
A survey of the various imaging modalities. Emphasis will be on the non-film/screen imaging systems including image intensification and fluoroscopy, videotape/videodisc recording, television monitoring, ultrasonography, xeroradiography, computed tomography, and magnetic resonance imaging.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: RAD 103 and RAD 201

RAD 203 - Radiologic Pathology
A survey of the commonly encountered medical and surgical disorders, their affect on the radiologic examination, and their presentation on the finished radiograph. The student will learn correlation of the various disorders with radiographs.
Course Hours Per Week: Class 2.
Quarter Hours Credit: 2.
Prerequisites: BIO 250, BIO 251, RAD 104, RAD 105 and RAD 106

RAD 204 - Methods of Quality Assurance
An introduction to the evaluation of radiographic systems to assure consistency in the production of quality images. The components involved in the radiographic system will be identified and tests and procedures to evaluate these components will be discussed. Photographic quality assurance will be used to evaluate radiographic processors. The student will test various pieces of radiographic equipment in the laboratory setting.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisites: RAD 103, RAD 107, and RAD 201

RAD 205 - Radiation Biology and Protection
This course is designed to provide the student with a thorough knowledge of the effects of radiation on living systems from the cell up to the entire individual. Emphasis is placed on the short- and long-term genetic and somatic effects of both high and low levels of radiation exposure. The course stresses the understanding and use of available methods that the radiographer may use to keep patient and staff exposure to a minimum. Regulations dealing with radiation protection are covered and the ALARA concept is emphasized.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisites: BIO 250, BIO 251, RAD 103, and RAD 107

RAD 206 - Radiographic Procedures IV
Conclusion of the study of radiographic procedures and positioning. Procedures involving the central nervous, reproductive, and circulatory systems along with mammography, tomography, foreign body localization, trauma and pediatric radiography will be covered. Cross-sectional anatomy will be studied.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisite: RAD 106

RAD 207 - Clinical Education IV
A continuation of practical experience in a hospital or physician's office setting. The student will be given increasing responsibilities which will eventually allow the student to demonstrate his ability to operate a radiographic room and other radiographic equipment with minimum supervision and to evaluate the radiograph he/she has produced. Competency evaluation continues with students under both direct and indirect supervision.
Course Hours Per Week: Clinical 18.
Quarter Hours Credit: 6.
Prerequisite: RAD 112

RAD 208 - Clinical Education V
Continuation of clinical experience. Increasing responsibilities will be offered in manipulation of radiographic equipment and radiographic procedures. Evaluation of radiographs will be emphasized and an introduction to the radiologic specialties will be included with short rotations through the specialty areas. Weekly film critiques will be held.
Course Hours Per Week: Lab 2, Clinical 18.
Quarter Hours Credit: 7.
Prerequisite: RAD 207

RAD 209 - Clinical Education VI
Continuation of practical experience in the clinical setting. Increasing responsibilities in radiographic procedures will lead the student to indirect supervision in most areas of radiography. Competency evaluation will be completed. Weekly film critiques will strengthen the student's ability to evaluate radiographs and identify radiographic anatomy.
Course Hours Per Week: Lab 2, Clinical 21.
Quarter Hours Credit: 8.
Prerequisite: RAD 208

RAD 210 - Clinical Education VII
Completion of clinical education. The student will be rotated through areas which the faculty and student feel are necessary to strengthen the student's clinical experience. The level of supervision will be mostly indirect. Final competency evaluation will be performed and simulation of infrequent examinations will be completed. Weekly film critiques will be held.
Course Hours Per Week: Lab 2, Clinical 21.
Quarter Hours Credit: 8.
Prerequisite: RAD 209

RED 070 - College Level Reading
College Level Reading develops effective reading and clear thinking skills at the college level. Students will learn to read and interpret passages from textbooks, periodicals, and catalogs. Students also will learn to read and interpret application forms and basic business agreements. The primary purpose of this course is to prepare students to read materials encountered in college courses and in personal activities.
Course Hours Per Week: Class 5.
Institutional Hours Credit: 5.
(Does not apply toward graduation.)
Prerequisite: Placement by entry testing

RED 080 - Advanced Reading I
Advanced Reading I continues the student's mastery of literate levels of comprehension. Vocabulary emphasis is on words specific to the content of various curricula. Students learn to read for a variety of purposes.
Course Hours Per Week: Class 5.
Institutional Hours Credit: 5.
(Does not apply toward graduation.)
Prerequisite: Satisfactory completion of RED 070 or placement by entry testing

RED 090 - Advanced Reading II
Advanced Reading II teaches reading for writing and encourages effective research skills. The course prepares students to read complex materials, to research information, and to use higher level critical thinking skills. This course lends itself to writing at the computer, and students are taught to analyze and produce writing for reading for their peers.
Course Hours Per Week: Class 5.
Institutional Hours Credit: 5.
(Does not apply toward graduation.)
Prerequisite: Satisfactory completion of RED 080 or placement by entry testing

REL 150 - Introduction to Religion
This course covers religion as a field of study, major modes of religious expression, chief issues in religious thought and experience, the search for method since the Enlightenment, and contemporary developments.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

REL 198 - World Religions
A study of the basic concepts and religious beliefs of mankind as reflected by various cultures.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

REL 250 - Religion in America
This course examines the development and process of religion in the United States from colonial times to the present, surveying Protestant, Catholic, and Jewish leaders, native American and black American traditions, religious reform and revivalism.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

RLS 103 - Fundamentals of Real Estate
This course consists of instruction in fundamental real estate principles and practices, including real estate law, financing, brokerage, closing, valuation, management, and taxation. Also included is instruction on residential building construction, land use, the real estate market and the North Carolina Real Estate License Law and Rules/Regulations of the North Carolina Real Estate Licensing Board.
Course Hours Per Week: Class 6.
Quarter Hours Credit: 6.
Prerequisite: None

RLS 109 - Real Estate Math
This course consists of the practice and application of major aspects of real estate math.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: RLS 103 or an equivalent course approved by the North Carolina Real Estate Licensing Board or by instructor approval.

RLS 114 - Real Estate Law
This course consists of advanced level instruction in real property ownership and interests, transfer of title to real property, land use controls, real estate brokerage and the law of agency, real estate contracts, landlord and tenant law, mortgages/deeds of trust, property insurance, federal income taxation of real estate, the N.C. Real Estate License Law, Rules/Regulations of the N.C Real Estate Licensing Board, and the Licensing Board's "Trust Account Guidelines."
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: RLS 103 or an equivalent course approved by the North Carolina Real Estate Licensing Board

RLS 115 - Real Estate Finance
This course consists of advanced level instruction on the major aspects of financing real estate transactions, including sources of mortgage funds, the secondary mortgage market, financing instruments, types of mortgage loans, underwriting mortgage loans, consumer legislation affecting real estate financing, real property valuation, closing real estate sales transactions, and finance mathematics.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: RLS 103 or an equivalent course approved by the North Carolina Real Estate Licensing Board

RLS 116 - Real Estate Brokerage Operations
This course consists of basic instruction in the various aspects of real estate brokerage operations, including establishing a brokerage firm, management concepts and practices, personnel and training, marketing operations, records and bookkeeping systems (including trust account bookkeeping), and financial operations.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: RLS 103 or an equivalent course approved by the North Carolina Real Estate Licensing Board

SAF 119 - First Aid and Adult and Infant/Child CPR
This course will certify the student in first aid and infant/child and adult CPR. Topics will include principles of responding to emergencies and techniques for handling common childhood injuries, accidents, and illness. Recommend: Course be taught by a certified representative of either American Heart Association or American Red Cross.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

SAF 120 - First Aid
This course will introduce students to basic first aid and enable them to successfully cope with the everyday injuries that might occur. Course coverage will range from minor cuts and burns to artificial respiration and the treatment of shock.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

SAF 121 - First Aid and Marine Safety
This course introduces students to first aid procedures which will enable them to successfully cope with the everyday injuries and accidents that may occur in a marine environment. Prevention of these accidents will be discussed and stressed. Students will be taught safety rules utilized on board a vessels as well as at shore stations.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

SOC 150 - Introduction to Sociology
This course is designed to cover the basic principles of sociology and to provide an understanding of sociological concepts, methodology, culture, social structure and stratification, collective behavior, deviance, social mobility, demographics, and contemporary social institutions.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

SOC 250 - Sociology of the Family
A comprehensive study of marriage and a changing family structure, relationships, roles, and functions. The course may include the following topics: bases for mate selection, courtship patterns, the family as an institution, adjustment, parenting,

communication, and conflict resolution.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: SOC 150

SOC 260 - Sociology of Deviant Behavior
This course focuses on the various sociological theories of deviant behavior. Areas covered may include substance abuse, sexual deviance, violence, property crimes, and mental disorders.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: SOC 150

SOC 265 - Sociology of Juvenile Delinquency
This course is designed to analyze the causes, treatment, and prevention of delinquency. Emphasis is placed on the sociological and psychological parameters affecting adolescent development which may contribute to delinquency.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: SOC 150

SOC 270 - Modern Social Problems
A critical analysis of current major social issues and problems in American society. Systemic and institutional problems related to race, ethnics, crime, and social disorganization may be covered with emphasis on strategies for improvement.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: SOC 150

SPA 150 - Spanish I
Using a functional, integrated skills approach, this course is the first of a two-quarter sequence for beginning students of Spanish. Receptive skills and productive skills are developed simultaneously. Course includes aural-oral practice, basic reading and writing skills and developing speaking skills in the language. Basic grammar will be incorporated in the development of these skills.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

SPA 151 - Spanish II
Using a functional, integrated skills approach, this course is the second of a two-quarter sequence for beginning students of Spanish. Receptive skills and productive skills are developed simultaneously. Course includes aural-oral practice, basic reading and writing skills and developing speaking skills in the language. Basic grammar will be incorporated in the development of these skills.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: SPA 150

SPA 160 - Introductory Spanish
An introduction to modern Spanish with an emphasis on command of the language, this course includes aural-oral practice, basic reading and writing skills, and patterns of spoken Spanish.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

SPH 150 - Introduction to Speech
This course provides students with an introductory perspective of an experience in speech communication. Incorporating both the theories of speech and the application of those theories through skill development exercises, the course focuses on four major categories of information: elements of communication, interpersonal communication, small group interaction, and public speaking.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

SPH 155 Public Speaking
This course provides opportunities for students to prepare and present public speeches and to receive assistance and critical, evaluative feedback from their peers and from the instructor. The course emphasizes analysis, research, organization and development of content and delivery.
Course Hours per Week: Class 5
Quarter Hours Credit: 5
Prerequisite: Placement by entry reading testing or satisfactory completion of RED 090

SWK 150 - Introduction to Social Work
A survey course covering the historical development, philosophy, organizational structure, and methods in professional social work in the United States.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

WLD 101 - Basic Welding
This is an overview of equipment and procedures used by the welding industry. Instruction will be given in methods, techniques and skills. The objective is to furnish students with a working knowledge of the welding field, and demonstrate how it is related to manufacturing.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

WLD 134 - Marine Welding
There will be demonstrations by the instructor and practice by students in the the flat position to the vertical position in the time allotted during the welding class. Students should become proficient in welding stringer beads from the flat position to the vertical position in the time allotted during the quarter. Safe and correct methods of assembling and operating the welding equipment, the correct use of flame cutting and arc cutting equipment applicable to mechanical repair work will be demonstrated.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

VOCATIONAL CURRICULA

In North Carolina, as well as throughout the nation, the demand for skilled tradesmen is at an all-time high. Hardly a day passes that the College does not have at least one call from industry looking for prospective employees. Graduates of the trade programs sometimes have as many as four or five offers of employment upon graduation.

Students in the skilled trade programs are trained in shops similar to those of private industries. The shops contain testing and measuring instruments, tools, and equipment of the same size and types as found in private firms. The facilities make possible practical instruction which is essential to the preparation of skilled workers needed by today's modern industries. Students in these trade programs spend twenty-five to thirty hours per week in school; this time is divided between classroom studies and practical shop work.

Skilled craftsmanship in the occupation, appropriate educational background and leadership ability are the bases for instruction selection in these trade courses.

A diploma is awarded to those students who satisfactorily complete the full-time trade program. To be eligible for the diploma, students must maintain satisfactory grades in all shop and class work, and maintain an overall grade point average of 2.00.

CAPE FEAR COMMUNITY COLLEGE
AUTHORIZED PROGRAMS

One year (12 months) training courses are offered in the following skilled trades:

		Code	Diploma	Diploma
1	**Air Conditioning, Heating and Refrigeration**	**V024**	*	
2	**Boatbuilding**	**V115**	*	
3	**Dental Assisting**	**V011**	*	
4	**Industrial Electricity**	**V124**	*	
5	**Industrial Mechanics**	**V033**	*	
6	**Light Construction**	**V029**	*	
7	**Marine and Diesel Mechanics**	**V034**	*	
8	**Medical Transcription ****	**V127**	*	
9	**Phlebotomy**	**V168**		*
10	**Practical Nursing**	**V038**	*	
11	**Truck Driver Training ****	**V083**		*
12	**Welding**	**V050**	*	

Related Courses (continued)

** Pending approval by the State Board of Community Colleges. Anticipated start date is Fall, 1996.

Air Conditioning, Heating and Refrigeration

The Air Conditioning, Heating and Refrigeration curriculum is designed to teach knowledge and skills necessary for servicing and installing residential and light commercial climate control equipment. Instruction will include heating and cooling theory, applied electricity and electronics, and the operating principles for a wide-range of heating and cooling equipment. The diploma program will emphasize start-up and service skills for oil, gas and electric furnaces, air-cooled air conditioning and air-to-air heat pumps.

Advanced diploma level programs will provide for more in-depth study and experience and will also include service and installation of water-cooled air conditioners, water source heat pumps, variable speed heat pumps, conventional hydronic systems and residential and light commercial system design.

MAJOR COURSES			Credit
AHR	1113	Servicing Heating Equipment	6
AHR	1115	Fundamentals of Heating	3
AHR	1121	Principles of Refrigeration	6
AHR	1123	Principles of Air Conditioning	5
AHR	1129	Applied Electricity for Heating, Ventilation & Air Conditioning Systems	3
AHR	1132	Air Conditioning Servicing	7
AHR	1135	Applied Electronics for Heating, Ventilation & Air Conditioning Systems	3
AHR	1138	All-Weather Systems: Convention	6
AHR	1139	All-Weather Systems: Heat Pumps	7
			46
RELATED COURSES			
BPR	1104	Blueprint Reading	3
ELC	1150	Basic Electricity	3
ELC	1151	Applied Wiring Diagrams	3
MAT	1101	Trade Mathematics	5
WLD	1104	Basic Gas Welding	2
			16
GENERAL EDUCATION			
ENG	1101	Communication Skills	2
PHY	1101	Applied Science	4
PSY	1101	Human Relations	3
			9
TOTAL CREDITS			**71**

AIR CONDITIONING, HEATING & REFRIGERATION
The four-quarter sequence of courses recommended for the full-time student is:

I-FALL
AHR 1113
AHR 1115
ELC 1150
MAT 1101
WLD 1104

II-WINTER
AHR 1121
AHR 1129
BPR 1104
ELC 1151
ENG 1101

III-SPRING
AHR 1123
AHR 1132
AHR 1135
PHY 1101

IV-SUMMER
AHR 1138
AHR 1139
PSY 1101

Boatbuilding

The Boatbuilding curriculum prepares individuals for employment in the boat manufacturing and repair industries. Today's boatbuilder is a skilled craftsman who can create complex shapes out of fiberglass, wood and an array of other space age materials. The boatbuilder must be able to select the proper tools and materials required for a particular job and to plan its efficient execution so that the work can be finished in accordance with blueprint specifications.

Graduates may find employment with a yacht manufacturer or other companies that need fine wooden furniture and mouldings fabricated and installed. Opportunities also exist in the fiberglass industry. Boat hulls, some automobile bodies, shower stalls and other items are made from fiberglass molds. Boatbuilding graduates know how to build these molds to a mirror finish from a set of blueprints. Graduates may also find employment with a boat yard that maintains, repairs and renovates boats.

MAJOR COURSES			Credit
WWK	1110	Modern Yacht Joiner Practice I	5
WWK	1111	Modern Yacht Joiner Practice II	4
BTB	1114	Yacht Repair and Renovation	7
ELC	1101	Practical Marine Electricity I	3
FBG	1101	Fiberglass Mold Making	7
BTB	1110	Boatbuilding I	9
BTB	1111	Boatbuilding II	8
BTB	1112	Boatbuilding III	7
WLD	1101	Basic Welding	2
			52
RELATED COURSES			
DFT	1127	Marine Drafting	5
MAT	1101	Trade Mathematics	5
			10

GENERAL EDUCATION		
ENG 1101	Communication Skills	2
PHY 1101	Applied Science	4
		6

TOTAL CREDITS **68**

BOATBUILDING
The four-quarter sequence of courses recommended for the full-time student is:

I-FALL	III-SPRING
BTB 1110	BTB 1112
DFT 1127	PHY 1101
MAT 1101	WWK 1111
II-WINTER	**IV-SUMMER**
BTB 1111	BTB 1114
ELC 1101	FBG 1101
ENG 1101	WLD 1101
WWK 1110	

Dental Assisting

The Dental Assisting curriculum prepares graduates to assist the dentist in providing treatment services. Functions performed by the dental assistant include dental health education, preparing dental materials, preparing the patient for treatment, taking dental X-rays, maintaining dental supplies and equipment, assisting the dentist providing selected services for the patient, making appointments, maintaining patient records and other office management procedures. Graduates may be employed by dental offices, dental clinics, public health clinics, federal service clinics, dental schools, state health department, dental manufacturers and insurance companies.

Graduates are eligible to take the examination given by the Dental Assisting National Board, Incorporated to become a certified dental assistant.

Individuals desiring a career in dental assisting should, if possible, take biology, mathematics and typing courses prior to entering the program.

Competencies:
In the process of successfully completing this program of study, the student will have demonstrated the ability to:

1. Demonstrate a sound grasp of basic skills and knowledge in general studies, biomedical sciences, dental sciences and clinical sciences.

2. Practice dental assisting as an integral member of the dental health team within the ethical and legal framework of the profession with a high standard of competency.

3. Effectively apply oral and written communication skills in interaction with patients, members of the dental team and other health care professionals.

4. Successfully complete the Dental Assisting National Board to become a certified dental assistant.

MAJOR COURSES		Credit
DEN 1001	Introduction Dental Assisting	1
DEN 1002	Dental Materials I	3
DEN 1003	Dental Sciences I	4
DEN 1004	Dental Sciences II	3
DEN 1006	Dental Materials II	4
DEN 1008	Dental Office Management I	4
DEN 1009	Dental Radiology	5
DEN 1010	Clinical Procedures I	6
DEN 1011	Dental Office Management II	3
DEN 1012	Dental Office Practice	7
DEN 1013	Basic CPR and Dental Emergencies (C)	2
DEN 1014	Clinical Procedures II	5
DEN 1015	Dental Office Practice II	10
DEN 1016	Oral Health and Nutrition	3
		60

RELATED COURSES		
BIO 1121	Human Anatomy and Physiology (C)	5
	or	
BIO G240	Human Anatomy and Physiology (B)	6
	or	
BIO 1110	Anatomy and Physiology (S)	5

Five (5) Credit Hours Required

GENERAL EDUCATION		
ENG 101	Grammar (C)	3
	or	
ENG 101	English I (B)	3
	or	
ENG G101	Freshman Composition (B)	5
	or	

ENG 101	Composition I (JS)	5
	and	
ENG 114	Oral Communications (C)	3
	or	
COM G105	Introduction to Communication Studies (B)	5
	or	
ENG 204	Oral Communications (JS)	3
	or	
SPH 161	Fundamentals of Speech Communications (S)	3
	and	
PSY 102	Introduction to Psychology (C)	3
	or	
PSY G105	General Psychology (B)	5
	or	
PSY 105	General Psychology (JS)	5
	or	
PSY 201	Introduction to Psychology (S)	5

Nine (9) Credit Hours Required

(B) Brunswick Community College
(JS) James Sprunt Community College
(S) Southeastern Community College
(C) Cape Fear Community College

TOTAL CREDITS **74**

DENTAL ASSISTING

(A dental assistant is the individual in the dental office who assists the dentist in providing treatment services. Functions performed by the dental assistant include infection control procedures, preparing dental materials, preparing the patient for treatment, taking dental radiographs, maintaining dental supplies and equipment, providing selected services for the patient, scheduling appointments, maintaining patient records, and other practice management procedures. Dental assistants may be employed by dental practices, dental clinics, government health clinics, dental schools, dental distributors and insurance companies.)

The four-quarter sequence of courses recommended for the full-time student is:

I-FALL
BIO 1121
DEN 1001
DEN 1002
DEN 1003
DEN 1010
DEN 1013

II-WINTER
DEN 1004
DEN 1006
DEN 1014
DEN 1009
PSY 102

III-SPRING
DEN 1008
DEN 1012
DEN 1016
ENG 101

IV-SUMMER
DEN 1011
DEN 1015
ENG 114

Industrial Electricity

The Industrial Electricity program is designed to prepare students for the installation, repair and maintenance of electrical equipment. The emphasis is on motors and related control systems, but students who take the basic courses will have sufficient knowledge and skill to work as helpers for electricians or repairmen in house wiring, small appliance repair, industrial maintenance, lineman and related jobs.

MAJOR COURSES		**Credit**
ELC 1104	Basic Electricity I	8
ELC 1105	Basic Electricity II	8
ELC 1115	AC and DC Machinery	7
ELC 1116	Motor Control	5
ELC 1125	Industrial Wiring Practices	6
ELN 1106	Instrument Familiarization	5
ELM 1111	Electro-Mechanical Relays and Symbols	5
ELN 1130	Solid State Devices, Circuits and Symbols	7
		51

RELATED		
BPR 1104	Blueprint Reading	3
BPR 1109	Blueprint Reading	3
MAT 1101	Trade Mathematics	5
ELC 1120	Electrical Calculations	5
WLD 1102	Basic Welding	1
		17

GENERAL EDUCATION		
ENG 1101	Communication Skills	2
ENG 1102	Communication Skills	2
PSY 1101	Human Relations	3
		7

TOTAL CREDITS **75**

INDUSTRIAL ELECTRICITY

The four-quarter sequence of courses recommended for the full-time student is:

I-FALL
ELC 1104
ELN 1106
ENG 1101
MAT 1101

II-WINTER
ELC 1105
ELC 1120
ELM 1111
ENG 1102

III-SPRING
BPR 1104
ELC 1115
ELC 1116
PSY 1101

IV-SUMMER
BPR 1109
ELC 1125
ELN 1130
WLD 1102

Industrial Mechanics

The curriculum in Industrial Mechanics prepares students with a broad background in industrial skills required by industry for its mechanics. The individual develops skills in the repair and maintenance of industrial equipment, basic welding and cutting, refrigeration and air conditioning, direct and alternating current, machines and their controls, and related courses.

MAJOR COURSES			Credit
AHR	1103	Basic Heating and Air Conditioning	2
ELC	1100	Basic Electricity	2
ELC	1117	Industrial AC Motors and Controls	2
MEC	1113	Shop Processes I	2
MEC	1114	Shop Processes II	2
HYD	1121	Industrial Hydraulics I	2
HYD	1122	Industrial Hydraulics II	2
MEC	1127	Industrial Mechanics I	6
MEC	1128	Industrial Mechanics II	7
MEC	1129	Industrial Mechanics III	6
MEC	1130	Industrial Mechanics IV	8
WLD	1106	Welding and Burning I	2
WLD	1107	Welding and Burning II	2
			45
RELATED COURSES			
BPR	1104	Blueprint Reading	3
BPR	1105	Blueprint Reading	1
BPR	1108	Blueprint Reading	3
MAT	1101	Trade Mathematics	5
MAT	1102	Trade Mathematics	5
			17
GENERAL EDUCATION			
ENG	1101	Communication Skills	2
PHY	1101	Applied Science	4
PSY	1101	Human Relations	3
			9
TOTAL CREDITS			**71**

INDUSTRIAL MECHANICS
The four-quarter sequence of courses recommended for the full-time student is:

I-FALL
AHR 1103
BPR 1104
MAT 1101
MEC 1127
WLD 1106

II-WINTER
BPR 1105
ENG 1101
MAT 1102
MEC 1128
WLD 1107

III-SPRING
BPR 1108
ELC 1100
MEC 1113
HYD 1121
MEC 1129
PSY 1101

IV-SUMMER
ELC 1117
MEC 1114
HYD 1122
MEC 1130
PHY 1101

Light Construction

The Light Construction curriculum prepares individuals for employment in the building trades industry. Instruction is provided in carpentry, masonry, electrical wiring and plumbing. Students study applied mathematics, blueprint reading and sketching, safety and other related subjects. They learn the methods used in laying out a small structure, mixing and pouring cement, rough framing, laying brick and block, roofing and exterior finishing.

Graduates may find employment with home builders or with commercial building contractors. They may enter the building trades as apprentices or work as building maintenance mechanics in small industries or public buildings including schools, hospitals and apartment houses. After sufficient experience in the trade, some workers may establish their own business.

MAJOR COURSES			Credit
CAR	1101	Carpentry (Rough)	10
CAR	1102	Carpentry (Framing)	10
CAR	1103	Carpentry (Finishing)	11
BPR	1135	Blueprints and Field Coordination	3
ELC	1109	Electrical Wiring	3
MAS	1101	Masonry	10
PLU	1101	Basic Plumbing	3
			50
RELATED COURSES			
BPR	1110	Building Trades Blueprint Reading and Sketching	5
BPR	1113	Blueprint Reading: Building Trades	5
MAT	1101	Trade Mathematics	5
			15
GENERAL EDUCATION			
ENG	1101	Communication Skills	2
ENG	1102	Communication Skills	2
PSY	1101	Human Relations	3
			7
TOTAL CREDITS			**72**

LIGHT CONSTRUCTION
The four-quarter sequence of courses recommended for the full-time student is:

I-FALL
BPR 1110
CAR 1101
ENG 1101
MAT 1101

II-WINTER
BPR 1113
CAR 1102
ENG 1102
PSY 1101

III-SPRING
CAR 1103
PLU 1101

IV-SUMMER
BPR 1135
ELC 1109
MAS 1101

Marine and Diesel Mechanics

The Marine and Diesel Mechanics curriculum provides training for individuals interested in becoming mechanics to service and maintain the propulsion system for boats and various types of marine equipment. Manual skills in servicing marine and diesel equipment are developed in practical shop work. A thorough understanding of the operating principles of this equipment is provided through classroom instruction, laboratory experiments, group discussions and shop practices.

Marine and diesel engine mechanics maintain and repair mechanical, electrical, hydraulic and pneumatic equipment used on boats and in industrial applications. Mechanics inspect and test equipment to determine the causes of faulty operation; repair or replace defective parts to restore the machine or unit to proper operating condition; and use shop manuals, manufacturers' maintenance manuals and other publications for technical information.

MAJOR COURSES			Credit
DIE	1100	Introduction to Gas and Diesel Engines	8
DIE	1101	Marine and Diesel Engine Theory and Practice I	6
DIE	1102	Marine and Diesel Engine Theory and Practice II	7
DIE	1103	Marine and Diesel Engine Theory and Practice III	8
DIE	1104	Marine and Diesel Power-Train Systems I	2
DIE	1105	Marine and Diesel Power-Train Systems II	2
DIE	1108	Gas Diesel Fuel Systems I	3
DIE	1109	Gas Diesel Fuel Systems II	3
DIE	1110	Gas Diesel Fuel Systems III	3
HYD	1136	Fundamentals of Hydraulics	5
			47
RELATED COURSES			
ELC	1111	Direct and Alternating Electricity	3
MAT	1101	Trade Mathematics	5
PHY	1101	Applied Science	4
BPR	1131	Schematics and Diagrams: Marine and Diesel	3
WLD	1101	Basic Welding	2
			17
GENERAL EDUCATION			
ENG	1101	Communication Skills	2
ENG	1102	Communication Skills	2
PSY	1101	Human Relations	3
			7
TOTAL CREDITS			**71**

MARINE AND DIESEL MECHANICS
The four-quarter sequence of courses recommended for the full-time student is:

I-FALL
DIE 1100
ENG 1101
MAT 1101
PHY 1101

II-WINTER
BPR 1131
DIE 1101
DIE 1104
DIE 1108
ELC 1111
ENG 1102

III-SPRING
DIE 1102
DIE 1105
DIE 1109
PSY 1101
WLD 1101

IV-SUMMER
DIE 1103
DIE 1110
HYD 1136

Medical Transcription

The Medical Transcription curriculum is designed to provide the individual with the knowledge and skills necessary for employment as a medical transcriptionist. The objective is fulfilled through study and application in transcribing medical records; transcribing correspondence from machines; filing of correspondence, records, and other data.

Specific curriculum information will be provided following approval by the North Carolina Community College System.

Phlebotomy

A Phlebotomy Technician curriculum prepares the graduate to draw blood specimens from patients for the purpose of testing and analyzing blood. The job involves duties related to the preparation and maintenance of equipment used in obtaining blood specimen; the use of appropriate communication skills when working with patients; the selection of venipuncture sites; the care of blood specimen; and the entry of the testing process into the computer, as well as clerical duties associated with record keeping of the blood tests.

MAJOR COURSES			Credit
BIO	1121	Human Anatomy and Physiology I	5
BUS	1183	Terminology and Vocabulary	3
PBT	1101	Basic Concepts in Phlebotomy	8
			16

Practical Nursing

The Practical Nursing curriculum is designed to prepare the graduate to participate in assessing, planning, implementing and evaluating nursing care. The graduate is eligible to apply to take the National Council Licensure Examination (NCLEX-PN) which is required for practice as a Licensed Practical Nurse. Licensed Practical Nurses function under the supervision of the registered nurse or physician.

Licensed practical nurses may be employed in hospitals, long term care facilities, clinics, doctors' offices, industry, and public health and home health agencies.

Individuals desiring a career in practical nursing should be encouraged to take math and science courses in high school.

MAJOR COURSES		Credit
NUR 101P	Fundamentals of Nursing	7
NUR 105P	Issues and Trends	2
PHM 1002	Pharmacology	4
NUR 1003	Medical-Surgical Nursing I	12
NUR 1005	Medical-Surgical Nursing II	15
NUR 1009	Maternal-Child Health Nursing	13
		53
RELATED COURSES		
BIO 1003	Introduction to Human Body	5
PSY 250	Growth and Development	5
		10
GENERAL EDUCATION		
ENG 114	Oral Communications	3
PSY 150	Introduction to Psychology	5
		8
TOTAL CREDITS		**71**

AUDIT COURSES		
NUR 101P	Fundamentals of Nursing	7
PHM 1002	Pharmacology	4
NUR 1003	Medical Surgical Nursing I	8
NUR 1009	Maternal-Child Health Nursing	9

PRACTICAL NURSING

The four-quarter sequence of courses recommended for the full-time student is:

I-FALL
BIO 1003
NUR 101P
PSY 150

II-WINTER
NUR 1003
PHM 1002
PSY 250

III-SPRING
ENG 114
NUR 1009

IV-SUMMER
NUR 105P
NUR 1005

Truck Driver Training

The purpose of this program is to prepare the prospective driver to understand and comply with the laws and regulations governing the motor carrier industry and the basic principles involved in professional operation of commercial vehicles including safety and driver responsibility.

The program will include driving of tractor-trailers on the highway under various road and weather conditions and on a range course with forward and backing obstacle course exercises. Also included are procedures for properly performing pre-trip checks and all other requirements of the Commercial Driver's License (CDL) standards. Classroom topics will include laws and regulations, vehicle maintenance, safety precautions, daily records and logs, freight handling and security, handling of hazardous materials, defensive driving, map reading, trip planning, fire protection and special equipment.

Specific curriculum information will be provided following approval by the North Carolina Community College System.

Welding

The Welding curriculum gives students sound understanding of the principles, methods, techniques and skills essential for successful employment in the welding field and metals industry. Welders join metals by applying intense heat, and sometimes pressure to form a permanent bond between intersecting metals.

Welding offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, heavy equipment, railroads, construction, pipefitting, production shops, job shops and many others.

MAJOR COURSES			Credit
MEC	1113	Shop Processes I	2
MEC	1114	Shop Processes II	2
WLD	1119	Basic Arc Welding & Oxy-Fuel Cutting	10
WLD	1122	Commercial and Industrial Practice	3
WLD	1123	Inert Gas Welding (Tig, Mig and Plasma)	9
WLD	1124	Pipe Welding	6
WLD	1125	Certification Practices	4
WLD	1127	Advanced Arc Welding	10
			46
RELATED COURSES			
BPR	1112	Blueprint Reading: Welding	2
BPR	1117	Blueprint Reading: Welding	1
BPR	1120	Blueprint Reading of Pipe Drawings and Pipe Sketching	1
MAT	1101	Trade Mathematics	5
PHY	1101	Applied Science	4
PHY	1102	Applied Science	4
			17
GENERAL EDUCATION			
ENG	1101	Communication Skills	2
ENG	1102	Communication Skills	2
PSY	1101	Human Relations	3
			7
TOTAL CREDITS			**70**

WELDING
The four-quarter sequence of courses recommended for the full-time student is:

I-FALL
BPR 1112
MAT 1101
WLD 1119

II-WINTER
BPR 1117
ENG 1101
PHY 1101
WLD 1127

III-SPRING
BPR 1120
MEC 1113
PHY 1102
WLD 1122
WLD 1123

IV-SUMMER
ENG 1102
MEC 1114
PSY 1101
WLD 1124
WLD 1125

VOCATIONAL COURSE DESCRIPTIONS

AHR 1103 - Basic Heating and Air Conditioning
This is a basic course in heating and air conditioning to acquaint the industrial mechanic with principles, theory, and working knowledge of this equipment.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

AHR 1113 - Servicing Heating Equipment
An introduction to the servicing and repair procedures for electric, gas, and oil warm air heating systems. Emphasis is placed on students' hands-on practice in servicing, the analysis of operating malfunctions, and the repair of system components. Students will learn systematic procedures for diagnosing and repairing mechanical and electrical malfunctions.
Course Hours Per Week: Class 3, M. Lab 9.
Quarter Hours Credit: 6.
Corequisites: AHR 1115, ELC 1150

AHR 1115 - Fundamentals of Heating
An introduction to the fundamentals of warm air heat, including oil, gas, and electric forced air systems. Emphasis is placed upon terminology, operating principles, theory, components and materials utilized in installation, and servicing.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

AHR 1121 - Principles of Refrigeration
This course is an introduction to the principles of refrigeration terminology, the use and care of tools and equipment, and the identification and function of the component parts of a system. Other topics to be included will be the basic laws of refrigeration; characteristics and comparison of the various refrigerants; the use and construction of valves, fittings, and basic controls. Practical work includes tube bending, flaring and soldering. Standard procedures and safety measures are stressed in the use of special refrigeration service equipment and the handling of refrigerants.
Course Hours Per Week: Class 3, M. Lab 9.
Quarter Hours Credit: 6.
Prerequisite: WLD 1101

AHR 1123 - Fundamentals of Air Conditioning
Emphasis is placed on the installation, maintenance, and servicing of equipment used in the cleaning, changing, humidification and temperature control of air in an air-conditioned space. Installation of various ducts and lines needed to connect various components is made.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisites: AHR 1121, WLD 1101

AHR 1129 - Applied Electricity for Heating, Ventilation and Air Conditioning Systems
This course will cover the use of test instruments and equipment used in servicing electrical apparatus installation for air-conditioning and heating systems. Emphasis is placed on electrical principals and procedures for troubleshooting the various electrical devices used in air-conditioning and heating equipment. Student will learn how to use test instruments to analyze performance and troubleshoot switches, electrical heating devices, and wiring.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: ELC 1150
Corequisite: ELC 1151

AHR 1132 - Air-Conditioning Servicing
Installation, routine servicing, problem diagnosis, and repair air-cooled air conditioning systems. Emphasis is placed on the correct methods for locating, assembling, wiring, connecting to duct systems, charging, and system start-up and performance checks. Additional emphasis is placed on systematic problem diagnosis and repair procedures for refrigeration, electrical, and control system malfunctions. Students will learn how to properly install, perform routine service maintenance on, evaluate the cooling performance of, and apply systematic problem diagnosis and repair procedures to room cooling units and split and packaged systems.
Course Hours Per Week: Class 3, M. Lab 12.
Quarter Hours Credit: 7.
Prerequisites: AHR 1129, AHR 1121, WLD 1101
Corequisite: AHR 1123

AHR 1135 - Applied Electronics for Heating, Ventilation and Air Conditioning Systems
Common electronic control components utilized in HVAC systems. Emphasis is placed upon identifying different electronic components and their functions in HVAC system and motor drive control circuits. Students will learn how to identify these components, describe their functions in control circuitry, and to use test instruments to measure electronic circuit values and to identify malfunctions.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisites: ELC 1150, AHR 1129, ELC 1151

AHR 1138 - All-Weather Systems: Conventional
Principles of combination heating and cooling systems including gas-electric, all electric, oil-electric, and other combination systems. Emphasis is placed on proper safety and operational controls, selection and assembly of components, and installation of a complete all weather system. Students will learn how to construct, test, evaluate the performance of, and adjust all-weather conventional systems. In addition, students will learn how to solve service problems and to modify and/or repair an improperly installed system.
Course Hours Per Week: Class 3, M. Lab 9.
Quarter Hours Credit: 6.
Prerequisites: AHR 1115, AHR 1113, AHR 1123, AHR 1132, AHR 1129

AHR 1139 - All-Weather Systems: Heat Pumps
Principles of installation, service, and repairing of air-to-air heat pumps. Emphasis is placed on the different refrigeration cycles, selections of the components of a complete system, proper application and installation practices, and service procedures for air-to-air heat pump systems. Students will learn how to properly size and install a complete system, perform routine service procedures, analyze performance, and to apply systematic problem diagnosis and repair procedures.
Course Hours Per Week: Class 4, M. Lab 9.
Quarter Hours Credit: 7.
Prerequisites: AHR 1113, AHR 1132, AHR 1121

BIO 1003 - Introduction to the Human Body
This course is designed to help the student gain knowledge about the human body. The types of health are identified as they relate to nurses and patients. Useful signs in the evaluation of health or deviations from health are explained. Lectures will be given on heredity, introductory bacteriology and immunity. Detailed information will then be given on each system of the body.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

BIO 1121 - Human Anatomy and Physiology
Persons that will spend their lives working in the medical fields, e.g., dental hygiene, nursing, etc., will find it necessary to have a fundamental knowledge of the structure of the human body. These medical workers at various time may be expected to make judgments as to emergency action and may also be asked to carry out services for individuals which require knowledge beyond the scope of this course. These workers must have a working knowledge of human anatomy and physiology and some concept of the totality of the human body.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

BPR 1104 - Blueprint Reading
Students will study interpretation and reading of blueprints. Information is provided on the basic principles of the blueprint: lines, views, dimensioning procedures and notes.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

BPR 1105 - Blueprint Reading
Emphasis is placed on further practice in interpretation of blueprints as they are used in industry; study of prints supplied by industry; making plans of operation, introduction to drafting room procedures; sketching as a means of passing on ideas, information and processes.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: BPR 1104.

BPR 1108 - Blueprint Reading
This is a general course in interpreting blueprints. Analysis of electrical and pneumatic systems will be emphasized. Mechanical devices including piping, machines, gears, and system color coding will be introduced.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: BPR 1104

BPR 1109 - Blueprint Reading
This is a general course in interpretation of blueprints. Analysis of electrical and plumbing systems will be emphasized. Mechanical devices including heat and air, insulation, structure design, and system color coding will be introduced.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: BPR 1104

BPR 1110 - Building Trades Blueprint Reading and Sketching
Emphasis is placed on principles of interpreting blueprints and trade specifications common to the building trades. Students develop proficiency in making plan and pictorial sketches.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

BPR 1112 - Blueprint Reading: Welding
Emphasis is placed on a thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications are introduced.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

BPR 1113 - Blueprint Reading: Building Trades
Emphasis shall be placed upon reading and understanding all aspects of actual blueprints and the interpretation expected by the architect. Dimensions, symbols, special specifications, etc. are to be emphasized in this course.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

BPR 1117 - Blueprint Reading: Welding
Emphasis shall be placed on a thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications will also be studied.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: None

BPR 1120 - Blueprint Reading of Pipe Drawings and Pipe Sketching
Students will learn basic principles and methods of reading; reading and dimensioning pipe drawings with emphasis on piping relating to welders.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: None.

BPR 1131 - Schematics and Diagrams: Marine and Diesel
This course covers the interpretation and reading of blueprints. It promotes the development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on lines, views, dimensioning procedures, and notes will be covered.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

BPR 1135 - Blueprints and Field Coordination
Construction blueprints will be studied and field trips will be made to construction sites in order that students may gain firsthand experience reading project blueprints of jobs under construction presently by contractors. Estimating and actual work procedure will be emphasized in this course.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

BTB 1110 - Boatbuilding I
This course introduces the student to the safe and proper handling of power and hand tools in the boat shop. The sharpening, maintenance, and necessary adjustment of tools is stressed so that the student can realize optimum results from the equipment. Also, the student will be introduced to lofting and building a simple flat bottomed boat.
Course Hours Per Week: Class 5, M. Lab 12.
Quarter Hours Credit: 9.
Prerequisite: None

BTB 1111 - Boatbuilding II
More advanced hull development will be approached in this course. A jig is constructed from plans that could be used to build a single fiberglass or wooden boat, or a plug from which a mold could be made. The student is introduced to modern fabrics, core materials, and resins used in the fiberglass industry.
Course Hours Per Week: Class 4, M. Lab 12.
Quarter Hours Credit: 8.
Prerequisite: BTB 1110

BTB 1112 - Boatbuilding III
This course will introduce the student to wood and glass lamination techniques. The students will build a small sandwich core fiberglass boat and practice the fairing process, as well as the application of modern marine finishes.
Course Hours Per Week: Class 3, M. Lab 12.
Quarter Hours Credit: 7.
Prerequisite: BTB 1111

BTB 1114 - Yacht Repair and Renovation
This course introduces repair principals and methods for wood and fiberglass boats.
Course Hours Per Week: Class 4, M. Lab 9.
Quarter Hours Credit: 7.
Prerequisite: BTB 1112

BUS 1103 - Small Business Operations
This course is an introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business and employer - employee relations.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

BUS 1183 - Terminology and Vocabulary
This is a thorough course in word study appropriate for use in business, technical and professional offices. It emphasizes spelling and meaning of words, with an in-depth study of word stems, prefixes and suffixes.
Course Hours Per Week: Class 3,
Quarter Hours Credit: 3.
Prerequisite: None

CAR 1101 - Carpentry (Rough)
This course is a brief history of carpentry. Present trends of the construction industry will be covered along with the operation, care, and safe use of the carpenter's hand and power tools used in cutting, shaping, and joining construction materials used by the carpenter. Carpentry layout and framing basics will be emphasized in this course.
Course Hours Per Week: Class 6, M. Lab 12.
Quarter Hours Credit: 10.
Prerequisite: None

CAR 1102 - Carpentry (Framing)
Emphasis is placed on practical application in rough carpentry which consists of: framing, roofing, window and exterior door installation, exterior wall covering, exterior trim, and form work. Roof layout and framing will be emphasized in this course.
Course Hours Per Week: Class 5, M. Lab 15.
Quarter Hours Credit: 10.
Prerequisite: None

CAR 1103 - Carpentry (Finishing)
Millwork as performed by the general carpenter during building construction using shop tools and equipment will be emphasized in this course. Practical applications will include measuring, layout, and construction of door and window frames, stairs, interior and exterior cornice and trim work. Prefabricated materials will also be covered. Exterior and interior trim and finishing carpentry will be studied.
Course Hours Per Week: Class 4, M. Lab 21.
Quarter Hours Credit: 11.
Prerequisite: None

DEN 1001 - Introduction to Dental Assisting
A study of the history of dentistry and dental assisting with an introduction to the role of the dental assistant in modern practice as a member of the dental health team. Includes the education, function, respective professional organizations, laws and ethics governing the practice of dentistry, professional conduct of the dental assistant and an introduction to dental terminology.
Course Hours Per Week: Class 1.
Quarter Hours Credit: 1.
Prerequisite: None

DEN 1002 - Dental Materials I
A study of the physical and chemical properties and origin of dental materials, including the manufacturing process of specific materials. Laboratory exercises are designed to develop competency in skills in manipulation and application of the materials to dental procedures. Emphasis is on gypsum products, waxes, impression materials, amalgam and cavity bases.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

DEN 1003 - Dental Sciences I
This course includes two units of dental science and is designed to be taught sequentially or concurrently for flexibility in scheduling. Unit one is the study of embryology, histology, anatomy, physiology and morphology of the human dentition and its supporting structure and environment. Laboratory sessions are structured to facilitate the learning of form, function and identification of oral structures with special emphasis on the identification of the primary and permanent dentition. Unit two is the study of the bones, muscles, blood, lymph and nerve supplies of the head and neck region. Landmarks of the skull are identified and the relationship of head and neck anatomy to dental assisting is emphasized.
Course Hours Per Week: Class 4.
Quarter Hours Credit: 4.
Prerequisite: None

DEN 1004 - Dental Sciences II
This course includes two units of dental science and is designed to be taught sequentially or concurrently for flexibility in scheduling.

Unit One is a study of the basic principles of general and oral pathology, causes and treatment.

Unit Two is a basic study of classifications of drugs commonly used in dentistry, prescribing and administering drugs, as well

as therapeutic and adverse effects of drugs. Special consideration will be given to nitrous oxide. The role and responsibility of the dental assistant are emphasized.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: DEN 1003, BIO 1121
Corequisites: None

DEN 1006 - Dental Materials II
A study of physical and chemical properties of dental materials used in restorative dentistry. Laboratory exercises are designed to develop competencies in skills in manipulation and application of the materials in dental procedures.
Course Hours Per Week: Class 2, Lab 4.
Quarter Hours Credit: 4.
Prerequisite: DEN 1002

DEN 1008 - Dental Office Management I
Principles and procedures related to dental office management. Fundamentals of accounting and financial management are applied to dental office procedures. Opportunity for competency development in preparing, processing, maintaining and storing records; communications, scheduling appointments, inventory control and patient management is provided in laboratory skill practice.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: DEN 1001, DEN 1003

DEN 1009 - Dental Radiology
The principles and techniques of exposing, processing, mounting, interpreting, filing and storing intraoral and extraoral radiographic film. Characteristics of film, film selection for various techniques and care of equipment and facilities are included. Radiation physics, biological hazards and protection of patient, operator and others are emphasized. Laboratory and clinical practices are designed according to current legal requirements.
Course Hours Per Week: Class 2, Lab 6.
Quarter Hours Credit: 5.
Prerequisite: DEN 1003

DEN 1010 - Clinical Procedures I
Designed to prepare the student to anticipate the needs of the dentist, to assist in basic procedures and to utilize management skills. This course provides an introduction to the principles and procedures related to operatory equipment, instruments, sterilization and chairside dental assisting techniques including four handed dentistry. Major emphasis will be given to principles and procedures of operative dentistry and local anesthesia.
Course Hours Per Week: Class 4, Clinical 6.
Quarter Hours Credit: 6.
Corequisite: DEN 1002

DEN 1011 - Dental Office Management II
Designed to prepare the student for employment as a dental assistant. Ethical, legal and personal responsibilities; testing and certification requirements; professional development and clinical practice experiences will be discussed in group sessions to determine the diversity and depth of learning experiences, and to evaluate and plan subsequent assignments. Computer familiarization will also be introduced.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: Minimum Third Quarter standing in the Dental Assisting Program

DEN 1012 - Dental Office Practice I
A clinical science course in principles and procedures of operative dentistry, local anesthesia, dental operatory equipment, instruments, sterilization, charting and patient management. Emphasis is on developing skill competency in anticipating the needs and assisting the dentist in four-handed dental procedures.
Course Hours Per Week: Class 2, Clinical 15.
Quarter Hours Credit: 7.
Prerequisites: DEN 1002, DEN 1003, DEN 1010, DEN 1014

DEN 1013 - Basic CPR and Dental Emergencies
A study of the recognition, prevention and management of dental office emergencies. Laboratory experiences include practice in basic life supporting procedures (CPR), artificial respiration, procedures for relieving foreign body obstruction of the airway and monitoring and recording vital signs, and evaluating medical histories.
Course Hours Per Week: Class 2.
Quarter Hours Credit: 2.
Prerequisite: None

DEN 1014 - Clinical Procedures II
A continuation of Clinical Procedures I including experiences to increase the level of competency in patient management and chairside assisting. Special emphasis is placed on the dental specialties and the dental assistant's role in oral surgery, endodontics, pedodontics, prosthodontics, orthodontics and periodontics. Clinical sessions are designed to provide practical experience in chairside assisting.
Course Hours Per Week: Class 3, Clinical 6.
Quarter Hours Credit:: 5.
Prerequisite: DEN 1010

DEN 1015 - Dental Office Practice II
A clinical practice learning experience to increase dental assisting skills to job-entry level competency. Clinical assignments in various dental specialty practices, as well as general dentistry practices, will provide opportunities for advanced skill development in chairside assisting techniques, clinical support and business office procedures.
Course Hours Per Week: Class 2, Clinical 24.
Quarter Hours Credit: 10.
Prerequisite: DEN 1012

DEN 1016 - Oral Health and Nutrition
A study of the etiology, prevention and control of dental caries and periodontal disease with emphasis on the dental assistant's role in oral health education. A clinical learning experience will be provided to establish a minimum proficiency in coronal polishing, communication skills, plaque scoring indices, oral physiotherapy aids, fluorides, accident prevention and periodic recall in patient education. Nutrition and its effect on oral health will also be introduced.
Course Hours Per Week: Class 2, Clinical 3.
Quarter Hours Credit: 3.
Corequisite: DEN 1003

DFT 1127 - Marine Drafting
Students will learn how to read and understand boat plans. Each student will develop a lines plan from a table of offsets using standard marine drafting equipment. There will also be projects designed to give the student practical experience in interpreting blueprints.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: None

DIE 1100 - Introduction to Gas and Diesel Engines
This course promotes the development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. It includes a study of the construction and operation of components of gas and diesel engines, as well as the testing of engine performance, servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication, and methods of testing, diagnosing and repairing.
Course Hours Per Week: Class 3, M. Lab 15.
Quarter Hours Credit: 8.
Prerequisite: None

DIE 1101 - Marine and Diesel Engine Theory and Practice I
This course covers the principles of main propulsion of vessels, heavy equipment, and trucks employing internal combustion engines. Construction and various designs of the operational principles of two- and four-cycle internal combustion engines and their related piping systems, cooling, and lubrication are covered. Also, procedures for "lighting off" will be covered.
Course Hours Per Week: Class 2, M. Lab 12.
Quarter Hours Credit: 6.
Prerequisite: None

DIE 1102 - Marine and Diesel Engine Theory and Practice II
This course deals with two and four-cycle diesel engines that are used for propulsion of vessels and heavy equipment and trucks. In the construction and design of various two-cycle engines and their related system, cooling lubrication and air intake systems are covered. Procedure for "lighting off" and preventive maintenance will be discussed.
Course Hours Per Week: Class 3, M. Lab 12.
Quarter Hours Credit: 7.
Prerequisite: None

DIE 1103 - Marine and Diesel Engine Theory and Practice III
This course deals with the administration of gasoline and diesel engineering plants through the recording and filing of performance data. The course also deals with two- and four-cycle engines, and rebuilding, which includes preventive maintenance and periodic checks of diesel engines. This course will cover in great detail troubleshooting of two- and four-cycle engines.
Course Hours Per Week: Class 3, M. Lab 15.
Quarter Hours Credit: 8.
Prerequisite: None

DIE 1104 - Marine and Diesel Power-Train Systems I
This course is a study of principles and functions of Marine and Diesel Power-Train Systems and disassembly and assembly of clutches, torque converters, torque dividers, fluid couplings, manual transmissions, planetary systems, and automatic transmissions.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

DIE 1105 - Marine and Diesel Power-Train Systems II
This course is a study of principles and functions of Marine and Diesel Power-Train Systems and disassembly and assembly of marine gears, drive lines, final drives, differentials, and rear axles.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

DIE 1108 - Gas and Diesel Fuel Systems I
This course provides a thorough study of the fuel systems of the marine and diesel engines, fuel pumps, carburetors, fuel injection pumps and air intake systems. Characteristics of fuels, types of fuel systems, special tools and testing equipment for the fuel systems of marine and diesel engines are studied.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

DIE 1109 - Gas and Diesel Fuel Systems II
This course is a study of fuel systems and injection pumps. Characteristics of fuels, types of fuel systems, special tools and testing equipment for the fuel systems of marine and diesel engines will be covered.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

DIE 1110 - Gas and Diesel Fuel Systems III
This course is a continuation of the study of fuel systems and injection pumps. Characteristics of the types of fuel systems, special tools, and test equipment for the fuel systems of marine and diesel engines will be covered.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: DIE 1109

ELC 1100 - Basic Electricity
This course is an introduction to basic principles of electricity, basic electric units and symbols, Ohm's Law, and the use of electrical measuring instruments. This course is not as in-depth as ELC 1104, Basic Electricity.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

ELC 1101 - Practical Marine Electricity I
Emphasis is placed on an understanding of the basic 12-volt (DC) direct current electrical system from boat batteries. The (AC) alternating current system which is on some small vessels is also discussed. The installation and wiring of the various lights, electrical instruments and electric motors on a boat is studied in great detail. Safety is stressed throughout the course.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

ELC 1104 - Basic Electricity I
This course gives an introduction to basic theories and principles of electricity, as well as to basic electric units, symbols, and Ohm's Law regarding series and parallel circuits.
Course Hours Per Week: Class 5, M. Lab 9.
Quarter Hours Credit: 8.
Prerequisite: None

ELC 1105 - Basic Electricity II
This course gives an introduction to alternating current theory, sine wave generation and analysis, induction, reactance, impedance, phase relations, transformers, and power factor corrections.
Course Hours Per Week: Class 5, M. Lab 9.
Quarter Hours Credit: 8.
Prerequisite: ELC 1104

ELC 1109 - Electrical Wiring
This course gives an introduction to basic theories and principles of electricity, as well as basic units, symbols, and Ohm's Law regarding series and parallel circuits. The course also gives a basic principle of residential and commercial wiring according to National Electrical Codes and area building codes.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

ELC 1111 - Direct and Alternating Electricity
This course provides a thorough study of the electrical system of the equipment powered by gas and diesel engines. Battery cranking mechanisms, generators and alternators, ignition systems, accessories and wiring special tools, and use of testing equipment for electrical systems are covered.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

ELC 1115 - AC and DC Machinery
AC and DC motors, generators, voltage and current regulators, speed control, reversing and braking systems, and characteristics are studied. The student will physically setup and wire various systems and then collect data to determine characteristics and efficiency of system.
Course Hours Per Week: Class 4, M. Lab 9.
Quarter Hours Credit: 7.
Prerequisite: ELC 1104

ELC 1116 - Motor Control
This course is an introduction to control components, i.e., contractors, motor starters, pilot devices, code considerations, types of control, control circuits, analysis of control circuits, maintenance and troubleshooting of motor and control circuits including solid state.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: ELM 1111

ELC 1117 - Industrial AC Motors and Controls
This course will cover the fundamental concepts in single and polyphase circuits, machines, and controls. Instruction in the use of electrical test equipment in circuit analysis and troubleshooting will be given with practice in wiring electrical motors and motor control centers. Emphasis on OSHA safety regulations in the field of industrial electricity will also be given.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: ELC 1100

ELC 1120 - Electrical Calculations
This course is designed to improve the Industrial Electricity student's ability to solve problems relating to his or her field. Topics covered will include a review of series, parallel and combination circuits, power wire sizes, and line losses. Also included will be mathematics related to alternating current fundamentals including square root, Pythagorean Theorem, and practical trigonometry. Specific problems related to the electrical code book will also be discussed when applicable.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 1101

ELC 1125 - Industrial Wiring Practices
Wiring methods in industrial complexes are covered, including wire sizing, splicing, and code. Raceways, wireways, and duct systems are introduced. Accepted method of wiring motors, motor starters, relays, and transformers are emphasized.
Course Hours Per Week: Class 4, M. Lab 6.
Quarter Hours Credit: 6.
Prerequisite: ELC 1115

ELC 1150 - Basic Electricity
A study of the basic electrical principles and components needed for troubleshooting modern machines. A basic study is made of direct and alternating current and electrical distribution in series and parallel circuits. The students become familiar with the following electrical terms: insulators, conductors, semiconductors, coil, solenoids and polarity, safety with the use of electricity, relays, and electrical devices is stressed at all times.
Course Hours Per Week: Class 2, Lab 2.
Quarter Hours Credit: 3.
Prerequisite: None

ELC 1151 - Applied Wiring Diagrams
Common electrical control components with an emphasis on their function in a control circuit and the symbols utilized to identify them in wiring diagrams. Students will learn how to read wiring diagrams in order to identify and describe the functions of the control components and to diagnose and repair component malfunctions in an electrical control system.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

ELM 1111 - Electro-Mechanical Relays and Symbols
This course is an introduction to various types of relays (AC and DC), operating principles and characteristics. Various relay symbols are introduced. Maintenance and construction of relays are studied.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: ELN 1106

ELN 1106 - Instrument Familiarization
Students will learn the functional use of various tools and test equipment used in the electrical field.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: None

ELN 1130 - Solid State Devices, Circuits, and Symbols
This course is an introduction to the theory and applications of solid state devices used in industry, especially solid state control circuits for motors and related equipment. Basic transistor circuits, vacuum tubes, and basic vacuum tube circuits are covered. Programmable control systems are examined and programmed.
Course Hours Per Week: Class 5, M. Lab 6.
Quarter Hours Credit: 7.
Prerequisites: ELC 1105, BPR 1104, ELM 1111

ENG 1101 - Communication Skills
This course covers the basics of communication and their application to on-the-job activities. The student is introduced to memos, work estimates, work orders, necessary forms and records, and the writing of effective letters, including the application letter and resume. Emphasis is placed on descriptions and giving directions.
Course Hours Per Week: Class 2.
Quarter Hours Credit: 2.
Prerequisite: None

ENG 1102 - Communication Skills
This course covers the task skills involved in preparing for and undergoing an interview for a job. It also covers visualizing concepts and data, finding references through library use, taking notes, and organizing, writing, and presenting orally a report related to the student's field of study.
Course Hours Per Week: Class 2.
Quarter Hours Credit: 2.
Prerequisite: ENG 1101

FBG 1101 - Fiberglass Mold Making
Student will be introduced to the basics of constructing male and female molds for fiberglass production.
Course Hours Per Week: Class 4, M. Lab 9.
Quarter Hours Credit: 7.
Prerequisite: BTB 1112

HYD 1121 - Industrial Hydraulics I
This course covers the fundamentals of hydraulics and its uses in industry. A study of power transmission through hydraulics, the course will cover components and their function, pumps (gears and vanes), cylinders, and control valves.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

HYD 1122 - Industrial Hydraulics II
A continuation of HYD 1121, this course will cover industrial hydraulic circuits and components including governors, valve control and instrument control in detail.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: HYD 1121

HYD 1136 - Fundamentals of Hydraulics
The fundamentals of hydraulics and its use to transmit power are studied, including the following components and their function: pumps, lines, cylinders, valve, gauges and controls. Proper care, use, installation and storage of test equipment, minor repairs, assembly, removal and replacement of equipment are also covered.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: None

MAS 1101 - Masonry
The history of the bricklaying and the masonry industry, raw material, terminology, clay and shell brick, concrete block, mortar, laying foundations, cutting masonry materials, bonding, and the use, care, and maintenance of tools will be covered. Practice is given in selecting the proper mortars, layout, and construction of various building elements using brick and concrete block in order to develop skill in these areas.
Course Hours Per Week: Class 5, M. Lab 15.
Quarter Hours Credit: 10.
Prerequisite: None

MAT 1101 - Trade Mathematics
This course is designed to enhance the mathematical capabilities of each student. The general context of the course will be the coverage of the four basic operations working in the areas of whole numbers, common fractions, and decimals. The principles of prime numbers, dimensional analysis, percentage, ratios and proportions will also be covered. The course endeavors to use practical problems where possible.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: None

MAT 1102 - Trade Mathematics
This course further enhances the mathematical capabilities of the student through the study of powers and root of numbers, solutions and manipulations of formulas, first and second degree equations, linear measure, areas and volumes of regular geometric figures. Practical word problems are used in all areas of study where applicable.
Course Hours Per Week: Class 5.
Quarter Hours Credit: 5.
Prerequisite: MAT 1101

MEC 1113 - Shop Processes I
This course will introduce the student to basic machining operations. These operations will include turning, boring, milling, tapping, drilling and sawing. The student will be able to perform simple machining operations to manufacture and repair machined parts.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

MEC 1114 - Shop Processes II
This course will introduce the student to complex machining procedures. Machining of a wide variety of parts will require the student to develop skills in the use of mills and lathes. Students will be able to demonstrate advanced skills in the machine shop.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: MEC 1113

MEC 1127 - Industrial Mechanics I
This course is an introduction to the nature of work required of an industrial maintenance mechanic and his role in industry. It will deal with the identification, care, and use of basic hand tools used by a maintenance mechanic, including portable power tools and measuring devices. Also included are special tools and holding devices, methods of layout and fabrication, and threading and tapping. Benchwork such as filing, shaping, and forming metal parts will be practiced. OSHA standards will be stressed and will involve good housekeeping and shop safety.
Course Hours Per Week: Class 4, M. Lab 6.
Quarter Hours Credit: 6.
Prerequisite: None

MEC 1128 - Industrial Mechanics II
This course is a study of the various types of industrial piping systems and plumbing fixtures. It will cover types of pipe and fittings, methods of installation and repair, and include threading and pipefitting. Valves and other plumbing fixtures will be covered with emphasis on installation service and repair of existing systems.
Course Hours Per Week: Class 4, M. Lab 9.
Quarter Hours Credit: 7.
Prerequisite: None

MEC 1129 - Industrial Mechanics III
This course will cover the installation, repair, and servicing of mechanical power transmission equipment, including gears, belts, and roller chains. Basic rigging procedures and use of jacks, chain falls, and floor lifts will be covered. Emphasis will be on troubleshooting and routine maintenance tasks normally performed by the industrial mechanic.
Course Hours Per Week: Class 4, M. Lab 6.
Quarter Hours Credit: 6.
Prerequisite: None

MEC 1130 - Industrial Mechanics IV
This course will cover centrifugal and positive displacement type pumps and their principles of operation and theory. Training in assembly, parts replacement, packing and mechanical seal installation will be covered. Emphasis will be placed on motor pump alignment.
Course Hours Per Week: Class 5, M. Lab 9.
Quarter Hours Credit: 8.
Prerequisites: MEC 1127, BPR 1104

NUR 101P - Fundamental of Nursing
This course introduces the student to nursing and to basic nursing knowledge and skills. Concepts of illness-wellness, basic needs, growth and development, stress and adaptation, and communication. The role of the LPN in the health care setting is addressed. The role of nutrition in meeting clients needs is correlated throughout the course. Selected nursing procedures are demonstrated and opportunities for practice and return demonstration of proficiency are provided in the laboratory setting. The nursing process is introduced as a systematic method of planning and providing nursing care.
Course Hours Per Week: Class 4, Lab 6.
Quarter Hours Credit: 7.
Prerequisite: Acceptance in the LPN Program
Co/Prerequisites : BIO 1003, PSY 150

NUR 105P - Issues and Trends
This course is designed to present current issues and trends which impact on the nursing profession. Legal, ethical, economical, and professional concerns are examined.
Course Hours Per Week: Class 2.
Quarter Hours Credit: 2.
Prerequisite: None

NUR 1003 - Medical-Surgical Nursing I
Medical-Surgical Nursing is a two quarter course designed to acquaint the student to patients experiencing various types of common deviations in health. Med-Surg I is an introduction to the physical and psychosocial needs of the hospitalized adult experiencing illness. Homeostasis and the effects of stress are examined. Emphasis is placed on various types of common deviations in health, basic human growth and development and use of the nursing process to understand the nursing care needs of these patients. Nutrition and pharmacology are co-related to various types of illness and disease processes. Practice laboratory introduces and provides opportunity for practice of physical assessment, and more complex nursing skills. Clinical experiences in affiliating agencies are designed to provide opportunities to apply knowledge and learned technical skills and to develop beginning skills in use of the nursing process.
Course Hours Per Week: Class 7, Lab 2, Clinical 12.
Quarter Hours Credit: 12.
Prerequisites: BIO 1003, NUR 101P, PSY 150
Corequisites: PHM 1002, PSY 250

NUR 1005 - Medical-Surgical Nursing II
Medical-Nursing II is a continuation of NUR 1003 with examination of the physical and psychosocial needs of the patient experiencing various types of common deviations in health. Concepts from previous nursing and related courses are incorporated to continue examining the various types of illness and disease processes. The nursing process is utilized in both the classroom and clinical areas to identify and assist in meeting physiologic and psychosocial nursing care needs of patients. Nutrition and pharmacology are correlated to common illness and disease processes.
Course Hours Per Week: Class 10, Clinical 15.
Quarter Hours Credit: 15.
Prerequisite: NUR 1003, NUR 101P, PHM 1002, NUR 1009, PSY 150, PSY 250
Corequisite: NUR 105P

NUR 1009 - Maternal-Child Health Nursing
This course is designed to assist the student in acquiring the fundamental knowledge required in maternity and pediatric nursing. The family's experience of pregnancy, birth and the postpartum period is presented with emphasis on the nurse's role in contributing to a successful outcome. The normal infant and the newborn experiencing difficulty are discussed. Care of the growing child and the family reinforces the students knowledge of growth and development of the child from infancy through adolescence. The child's experience of hospitalization presents the emotional impact of hospitalization on the family and the child at various age levels. The student is introduced to the etiology, treatment and nursing care of common disorders that affect the child from infancy through adolescence. The study of pharmacology as it relates to the nurse's role in drug administration in maternal-child care is continued. The importance of nutrition and current nutritional trends are discussed. Content progresses from the simple to the complex as the student continues to develop skill in the application of the nursing process. Clinical experiences are provided in acute, ambulatory, and outpatient settings .
Course Hours Per Week: Class 8, Lab 2, Clinical 12.
Quarter Hours Credit: 15.
Prerequisites: NUR 101P, BIO 1003, PSY 150, PSY 250, NUR 1003, PHM 1002
Corequisites: ENG 114

PBT 1101 - Introduction to Health Care Team
This course is an introduction to the health care team. It describes the role of the phlebotomist in the relationship to other health care workers. The primary responsibility of the phlebotomist is for collecting blood specimens from patients for the purpose of laboratory analysis. The phlebotomist becomes familiar with the various types of health care institutions and departments in which he/she must interact. This course provides the student with an understanding of the basic concepts of communication and professional behavior. Topics include personal and patient interaction, professional protocol, communication skills, and the legal complications of the work
environment.
Course Hours Per Week: Class 1.
Quarter Hours Credit: 1.
Corequisites: PBT 1102, PBT 1103

PBT 1102 - Blood Collection Process
The phlebotomist is introduced to the blood collection concept. The students become familiar with collection equipment to include the various types of anticoagulants and blood collecting equipment. The study introduces the collection of other body fluids and of substances that can interfere in clinical analysis of blood constituents.
Course hours per week: Class 1, Clinical 3.
Quarter Hours Credit: 2.
Corequisites: PBT 1101, PBT 1103

PBT 1103 - Safety, Quality, and Liability
Health care workers must have respect for infection control policies, safety, quality assurance and liability. This course introduces the phlebotomist to the importance of infection control, quality control, quality assurance, total quality management, laboratory safety and liability.
Course hours per week: Class 1.
Quarter Hours Credit: 1.
Prerequisites: PBT 1101, PBT 1102

PBT 1104 - Phlebotomy Clinical Experience
New Hanover Regional Medical Center has an affiliation with Cape Fear Community College to allow the students to do the clinical laboratory rotation. The students will complete a minimum of:

100 successful venipunctures
25 successful skin punctures
5 observations of arterial punctures

Course Hours Per Week: M. Lab 12.
Quarter Hours Credit: 4.
Corequisites: PBT 1101, PBT 1102, PBT 1103

PHM 1002 - Pharmacology
The focus of this course is on basic concepts of pharmacology with a special emphasis on the role of the nurse in the clinical application of drug therapy. This course prepares the student to define terminology related to pharmacology and to discuss basic principles, types of drug preparations, storage considerations and legal responsibilities as well as to compute proper dosages and administer pharmacologic agents. Practice opportunities will be available during didactic and laboratory course components.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisites: BIO 1003, NUR 101P
Corequisite: NUR 1003

PHY 1101 - Applied Science
This course is an introductory study of the properties of materials and the principles of electricity and magnetism. Topics included are measurement, solids, liquids, gases, electric circuits, electromagnetism, simple machines, and systems of measurement. This course is a lab course to furnish hands-on experience.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: None

PHY 1102 - Applied Science
A continuation of PHY 1101, this course views the simple machines along with power, energy, motion, and mechanical advantage. This is a lecture and lab course mainly designed for mechanical emphasis.
Course Hours Per Week: Class 3, Lab 2.
Quarter Hours Credit: 4.
Prerequisite: PHY 1101

PLU 1101 - Basic Plumbing
This course is designed for the Light Construction curriculum and is a study of the various types of residential piping systems and plumbing fixtures. It will cover types of pipe and fittings, methods of installation and repair, and include threading and pipefitting. Valves and other plumbing fixtures will be covered with emphasis on installation service and repair of existing system.
Course Hours Per Week: Class 2, M. Lab 3.
Quarter Hours Credit: 3.
Prerequisite: None

PSY 1101 - Human Relations
This is a study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: None

WLD 1101 - Basic Welding
Emphasis is placed on welding demonstrations by the instructor and practiced by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment are stressed. Practice will be given for arc welding and flame-cutting methods applicable to mechanical repair work.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

WLD 1102 - Basic Welding
Emphasis is placed on welding demonstrations by the instructor and practiced by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment are stressed. Practice will be given for arc welding and flame-cutting methods applicable to mechanical repair work.
Course Hours Per Week: M. Lab 3.
Quarter Hours Credit: 1.
Prerequisite: None

WLD 1104 - Basic Gas Welding
Safe and correct methods of assembling and operating the welding equipment applied to the cutting and assembling of the metal tubing utilized in air-conditioning, heating, and refrigeration systems. Practice will be given to brazing and soldering aluminum, copper, and steel tubing.
Course Hours Per Week: Class 1, M. Lab 3.
Quarter Hours Credit: 2.
Prerequisite: None

WLD 1106 - Welding and Burning I
This course involves welding demonstrations by the instructor and practiced by students in the welding shop. The metallurgy of welding is discussed, as are safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding and flame-cutting. Emphasis is placed on electric arc and gas welding methods applicable to mechanical repair work. Brazing is also covered.
Course Hours Per Week: M. Lab 6.
Quarter Hours Credit: 2.
Prerequisite: None

WLD 1107 - Welding and Burning II
This course is a continuation of WLD 1106, giving the students additional practice in arc welding which will improve their efficiency as a welder. Emphasis will be on safety and use of arc and gas welding equipment. Practice will include oxy-acetylene welding, brazing, soft solder and silver solder as needed in mechanical, ship and dock repair work. Also, there will be a demonstration, by instructor, of Tig, Mig, and Plasma welding.
Course Hours Per Week: M. Lab 6.
Quarter Hours Credit: 2.
Prerequisite: WLD 1106

WLD 1119 - Basic Arc Welding and Oxy-Fuel Cutting
Emphasis is placed on the operation of the different types of AC and DC welding machines, and maintenance of welding machines. Studies are made on welding heats, polarities, and different types of welding electrodes used in joining various types of metals in the arc welding process. The set up and use of oxy-fuel cutting equipment is studied. After the student is capable of setting up welding equipment, practice weld beads will be made in all positions. Safety procedures are emphasized throughout the course in the use of tools and equipment.
Course Hours Per Week: Class 7, M. Lab 9.
Quarter Hours Credit: 10.
Prerequisite: None

WLD 1122 - Commercial and Industrial Practices
This course is designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding, and non-destructive testing and inspection.
Course Hours Per Week: Class 3.
Quarter Hours Credit: 3.
Prerequisite: WLD 1119 or WLD 1127

WLD 1123 - Inert Gas Welding (Tig, Mig, and Plasma)
This course is an introduction and practical operations in the use of inert gas arc welding. A study will be made of the equipment, operation, safety, and practice in the various positions. A thorough study of such topics as principles of operation, shielding gases, filler rods, process variations and applications, and manual and automatic welding.
Course Hours Per Week: Class 7, M. Lab 6.
Quarter Hours Credit: 9.
Prerequisite: WLD 1119 or WLD 1127

WLD 1124 - Pipe Welding
This course is designed to provide practice in the welding of pressure piping in the horizontal, vertical and horizontal-fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.
Course Hours Per Week: Class 4, M. Lab 6.
Quarter Hours Credit: 6.
Prerequisites: WLD 1122, WLD 1123

WLD 1125 - Certification Practices
This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his or her work. Emphasis is placed on attaining skill in producing quality welds.
Course Hours Per Week: Class 3, M. Lab 3.
Quarter Hours Credit: 4.
Prerequisites: WLD 1122, WLD 1123

WLD 1127 - Advanced Arc Welding
This course will be a continuation of WLD 1119 in order to give the student additional practice in welding plate steel of all thickness and in all positions to American Welding Society Codes. All safety procedures will be emphasized throughout the course. This course will enable the student to be better prepared to pass welding tests in industry and become a certified welder.
Course Hours Per Week: Class 7, M. Lab 9.
Quarter Hours Credit: 10.
Prerequisite: WLD 1119

WWK 1110 - Modern Yacht Joiner Practice I
In this course the student will learn the necessary skills to rough-in the interior bulkheads, soles, furniture, and cabinetry in the modern yacht.
Course Hours Per Week: Class 3, M. Lab 6.
Quarter Hours Credit: 5.
Prerequisite: BTB 1110

WWK 1111 - Modern Yacht Joiner Practice II
This course is an extension of Modern Yacht Joiner Practice I. Emphasis is placed on the finished woodworking and trim. Doors, drawers, and moldings will be constructed. Production jigs to increase efficiency will be utilized. Modern oils, paints, and varnish applications will be practiced.
Course Hours Per Week: Class 2, M. Lab 6.
Quarter Hours Credit: 4.
Prerequisite: WWK 1110

STUDENT HANDBOOK

Where to go for What

Absences	Instructor
Academic Advising	Faculty Advisor or Student Development
Academic Honors	Catalog/ Student Development
Academic Probation	Catalog or Counselors
Admissions	Student Development
Address Change	Admissions and Records
Advanced Placement	Counseling
Attendance	Instructor
Books, Supplies	Campus Bookstore
Buy, Sell, Trade Something	Bulletin Boards, see Admissions
Career Counseling	Career/Testing
Change Program/Major	Counseling
Clubs and Organizations	Student Activities
Course Selection	Advisor or Counselor
Drop a Course	Instructor or Student Development
Emergencies	Student Development
Fees	Business Office
Financial Aid	Financial Aid Office
First Aid	Student Development
General Interest Courses	Continuing Education
Grading System	Catalog or Student Development
I.D. Card	Learning Resources Center (Library)
Insurance	Business Office
Job Placement	Career/Testing
Lost & Found	Student Development
Parking Permits, Regulations	Business Office
Personal Counseling	Counselors
Registration	Student Development
Transfer Counseling	Advisors/Counselors
Tutoring	Center for Academic Enhancement
Transcripts	Student Development
Veterans	Student Development

Services to Students

Orientation

Student Development offers orientation programs prior to the start of each quarter to acquaint new students to the College, its facilities, resources, services, activities, organizations and policies.

All new students are encouraged to take advantage of these programs to maximize their opportunities at CFCC.

Counseling

Qualified counselors are available to assist students in selecting an appropriate course of study, to provide occupational and educational information, and to discuss scholastic or personal problems which may arise.

Services for Special Populations

The purpose of Cape Fear Community College's program for students with special needs is to provide auxiliary support services for students with various disabilities so that they may derive equal benefits from attending CFCC. It is the student's responsibility to advise the Special Populations Coordinator that he/she has special needs and indicate what type of service or accommodation will be needed.

Career and Testing Services

Career counseling is available through the Office of Career and Testing Services. Students are assisted with career decision-making, employment trends, and educational requirements.

Job placement assistance is also available to students and graduates. Employment Security Commission (ESC) representatives are on campus weekly to increase job placement opportunities.

GED Testing

The General Education Development (GED) diploma is administered at CFCC. Successful completion of the pre-GED is required before applying to take the GED test.

Retention and Graduation Rate Information

Anyone wishing to obtain information about first-time students rate of persistence and/or graduation rates should contact the Office of Career and Testing Services.

Developmental Studies

It is not uncommon for a student to enter college who, for some reason, is deficient in the basic skills of reading, English, and/or mathematics. Recognizing this and being committed to making every opportunity available for students to help ensure their success, the school established a Developmental Studies program. This program is designed to help students gain the necessary skills in reading, English, and/or mathematics that will allow them to enter the curriculum program of their choice. Successfully completing these developmental courses will help ensure that the student has the basic skills in reading, English, and/or mathematics to function at the required entry level. These courses are required for those students who have been identified by the Admissions and Records Office as needing enhancement in reading, English, or mathematics, or all.

Developmental courses earn credit; however, such credit does not apply toward the required hours for receiving a degree or in the calculations of grade point average.

Center for Academic Enhancement

The Center for Academic Enhancement (CAE) has been designed to help students acquire needed skills that will allow them to be successful in their curriculum courses. Students may receive individual and small group instructional assistance in Technical, Vocational, and College Transfer courses after submitting a signed Instructor Recommendation Form. There is also an open lab section in the CAE that is open to students, faculty, staff and community patrons.

The CAE maintains a resource of software programs that students can use to review and increase skill level in a variety of courses. The supplemental computer assisted instruction is available on an individual student basis.

Health and First Aid Services

The following health services are provided through the Office of Student Development:

(1) Minor first aid is available on campus.

(2) Illness and injury that cannot be taken care of by individuals on campus will be referred to community health facilities.

If illness or injury requiring transportation should occur before 5:00 PM, the Student Development Department should be contacted. The Duty Administrator (located at the switchboard) should be contacted after 5:00 PM.

(3) A drug abuse prevention program is sponsored by the school which includes distribution of available literature, providing audio visual materials, making available through the Library a limited number of current books on the subject, and a counseling service that refers students to local health professionals trained in the area of substance abuse.

Learning Resources Center (Library)

The Learning Resources Center (LRC) is located on the sixth floor of the M.J. McLeod (S) Building. The LRC is open from 7:30 AM - 10:00 PM Monday - Friday and 9:00 AM to 12:00 PM on Saturday. Summer hours are posted when different hours are observed. The LRC offers library and audiovisual services and an atmosphere which supports research, study and pleasure reading. The librarians and staff are always ready to help students.

The library has approximately 32,000 books and 600 periodicals. Easy to use, up-to-date electronic databases on CD-ROM include: Books-in-Print, Wilson Reader's Guide, Front-Page News, Careers and Jobs, World Book Encyclopedia, Grolier's Encyclopedia, and Social Issues Resource Series (SIRS). The library keeps a large collection of magazines, the Wilmington Morning Star newspaper, and a variety of census records from the Cape Fear Region on microfilm. Entertainment videos are available to be checked out. Also helpful are the audiovisual (AV) services. Audiovisual services include instructional videos that support student research and AV equipment that may be used for class presentations. Teleconferences may be requested by faculty, staff and local industry. Copies of all telecourse broadcasts are available for student checkout.

The LRC also provides two publications, "A Guide to the Library" and "LRC: A Self-Guided Tour." Individual and class orientation tours, interlibrary loan, photocopy service and individual reference service are available at all times that the LRC is open.

If you would like to "Surf the Net", the LRC provides INTERNET access through the easy-to-use computer program, Netscape.

Continuing Education Services

The Continuing Education Department offers a variety of training opportunities and other classes to meet the needs of the community. These nonacademic credit classes allow students to prepare for employment, upgrade skills or learn new skills. Training is also provided for employees of area industries and public agencies.

HRD/JTPA

The Human Resources Development Program (HRD) and Job Training Partnership Act (JTPA) division of Continuing Education offer classes throughout the year to help adults who are unemployed, underemployed or looking for further education.

Registration Information

Registration is the term used for enrolling in classes. Faculty and staff will assist students in choosing required classes, completing the registration form, securing a space in class and paying tuition fees.

Quarter System

The school year is divided into four quarters. Credits earned are in quarter hours. See course description section for number of credits required for graduation in each program.

Transition to Semester

Cape Fear Community College will change to a semester system beginning Fall Quarter, 1997. Faculty, staff and administration will assist students in the transition from quarter to semester hours.

Cape Fear Community College will continue to offer quality degree, diploma and certificate programs. In addition, training for business and industry, continuing education courses, occupational training, and other similar programs will continue as before.

All community colleges in the state of North Carolina will be converting to the semester system Fall of 1997. While our system of academic terms are changing, our mission remains the same.

Quarter Hour Credit

Each course listed is followed by a notation on the number of quarter hours it carries. Normally, the number of quarter hours earned is based on the number of class, laboratory or shop hours spent under the supervisor or the course instructor per week for the quarter. Usually one quarter hour credit is given for each lecture hour of class per week, for each two hours of laboratory work per week, or for each three hours of shop or manipulative laboratory per week. (A class hour is usually defined as 50 minutes of instruction.) Exceptions may be made in cases where specific classification is not feasible.

Course Load

A student who carries a minimum of 12 quarter hours is considered a full time student. The normal course load is 14 to 18 quarter hours. A student may carry a maximum of 24 hours credit. Any exception to this rule must be approved by the Dean of Student Development.

Procedures for Registering for Classes

Step 1. Advisement & Scheduling - Faculty advise students concerning course schedule and sign registration cards.

Step 2. Schedule Input - Students schedule input into the computers.

Step 3. Registration Receipt Form - Students pick up their schedule/receipt form.

Step 4. Payment of Tuition Fees - Business Office - All students pay tuition and fees.

Preregistration

Preregistration provides an opportunity for students to select early the classes they need to take for the next quarter. Currently enrolled students are allowed and encouraged to preregister at designated times.

Drop/Add/Late Registration

Drop/add/late registration will allow students to drop or add (adjust their schedule) or register late during the times specified in each quarter's Schedule of Classes.

Auditing Courses

Students who wish to audit courses must register for the audit by following the regular registration procedures and stating in

writing on a Registration Card or Drop/Add form which course(s) they are auditing. Auditing students receive no credit and are not required to participate in class discussion or take tests. Fees for audit courses are the same as those taken for credit. Changes from audit to credit or credit to audit may only be done during registration and drop/add periods.

Withdrawal

Students desiring to withdraw from school must contact the Admissions and Records Office to obtain the necessary forms and procedures for official withdrawal. A student who fails to withdraw officially will receive a grade of NC (No Credit), computed as a failing grade.

Students who withdraw from a course(s) within the first 20% of class hours will receive a grade of W which will not be computed in the GPA (Grade Point Average). Students who withdraw from a course(s) after this period must receive a grade of WP (Withdraw Passing) or WF (Withdraw Failing). WPs will not be computed in the GPA whereas WF's will be computed as a failing grade.

Students who withdraw from classes may be eligible for a tuition refund. See Refund Policy under the Expenses section of this handbook.

Students who withdraw after the eighth week of classes must obtain permission in writing from the Dean of Student Development.

Academic Information

Faculty Advising

The academic advising program at Cape Fear Community College seeks to facilitate student development and growth. Academic advising is an on-going, developmental process that assists students in setting and clarifying life/career goals and developing an educational plan to reach these goals.

Grading and Grade Point Averages

Grading is done by the traditional method of A through D along with negative categories such as F (Failure), WF (Withdraw Failing) and NC (No Credit). Grades are assigned a numerical value when determining a student's Grade Point Average (GPA).

Grading System

Grade	Significance	Quality Points Per Quarter Hour
A	Superior	4
B	Good	3
C	Average	2
D	Poor	1
F	Failure	0
I	Incomplete	0
NC	No Credit	0
W	Official Withdrawal	0
AU	Audit	0
WP	Withdrew Passing	0
WF	Withdrew Failing	0
CR	Credit by Exam	0
CT	Credit by Transfer	0
R*	Course must be repeated. Developmental courses only.	0

*Grades assigned are not used to calculate grade point average.

Grading Scale

The College grading scale is:

A = 92–100 C = 76–83
B = 84– 91 D = 68–75
F = 0–67

Translating Course Grades Into GPA

By taking the number of quarter hours assigned to a course and multiplying them by the value of the grade you determine the grade points for each course attempted. Example: If you take five courses that are assigned a total of 18 quarter hours, you may determine your GPA in the following manner:

Course	Grade	Quarter Hours Attempted		Times Grade Value		Equals Quality Points
1	B	2	X	3	=	6
2	A	6	X	4	=	24
3	C	4	X	2	=	8
4	B	3	X	3	=	9
5	F	3	X	0	=	0
6	WP	0	X	0	=	0
TOTALS		**18**				**47**

Divide the total number of hours attempted into the total quality points and that will give you your GPA; in this case 2.61 is the GPA.

Attendance

Absences seriously disrupt a student's progress in a class and diminish the quality of group interaction. Students are expected to punctually attend all lecture and laboratory sessions in the courses for which they are registered. Late arrivals and/or early departures may count toward total absences in classes.

Students must be in attendance at least eighty (80%) percent of the clock hours of a course to receive credit for the course. Those who do not meet minimum attendance requirements will be given the grade of NC (no credit), which will be computed in the student's grade point average as a failing grade.

Attendance requirements for each class are contained in the First-day handout distributed by the instructor. Some class requirements are more restrictive than others.

Special note to Marine Technology students: Students in the Marine Technology curriculum are at times involved in cruises on the ship that might take place during a holiday or quarter break during which time students are normally off. When such occurs, students must participate in the cruise.

Final Grades

Final grades for each of the student's classes will be mailed directly to the student as soon after the end of each quarter as possible. Students will receive one grade card which lists all courses taken during the quarter in which they were registered. This card will also show grade point average, total number of credit hours earned as a student here at CFCC and cumulative grade point average.

Incomplete Grades

Incomplete will be given only when circumstances justify additional time to complete the course. An incomplete must be removed within six weeks following the first day of the next quarter it was received. Grades not made up within six weeks will be recorded as an F.

Credit by Proficiency

For selected courses, students may request credit by proficiency examination for previous experience or training. The student must be currently enrolled at CFCC, and must not have enrolled in the course prior to taking the proficiency exam and must make written application to Student Development and the department chair. Students may challenge a course only once. Students successfully passing a proficiency exam will receive credit for the course as a CR (credit for record).

Advanced Placement

An entering first-year student may receive quarter hour credits based on Advanced Placement Examination of the College Entrance Examination Board (CEEB). These examinations are taken prior to the students high school graduation. Information on this examination program may be obtained from the high school counselor.

Cooperative Education

CFCC offers Cooperative Education in its Associate Degree programs. Co-op allows qualified students the opportunity to extend their classroom instruction to a viable work experience. Qualifying work experience must be related to the student's educational goals. Participating students receive college credits for the work experience and may use this as an elective.

To determine if you qualify or to find out more about Co-op, see your advisor.

CLEP

College Level Examination Program (CLEP) credit may be awarded for successful completion of specific exams. Official score reports (from CLEP) must be submitted to the Admissions and Records Office for evaluation of possible credit. CFCC does not administer CLEP exams.

Credit by proficiency, advanced placement and CLEP are awarded only for courses offered within the current curriculum of the institution and is appropriately related to the student's educational program.

Experimental Learning

CFCC does not award direct credit for previous experience or training. Proficiency exams or CLEP exams may be used as a means of receiving credit for prior knowledge.

Program Change

Students who desire to change from one program to another must complete a Change of Program form and submit it to a counselor. The counselor will evaluate program requirements and prerequisites and advise the student of any deficiencies.

Course Repeat Policy

Courses that are repeated fall into three different categories:

1. Courses with an earned grade of C or better may be repeated one time with special permission from a counselor.

2. Courses with an earned grade of D, F, NC, or WF may be repeated a maximum of two times.

3. Audit courses may be repeated a maximum of two times.

When a course has been repeated, the higher grade will be used in GPA calculation. However, it is the responsibility of students who repeat classes to complete the necessary paperwork to have their academic transcripts evaluated. (The appropriate forms, Request for Transcript Review, are available through the Admissions and Records Office). Lower grades will be removed from GPA calculation; however, these grades will continue to appear on the academic transcript. Students may repeat a course a maximum of two times. When a course has been repeated twice, the highest of the three attempts will be used in GPA calculation.

Students who receive veterans benefits or financial aid should be advised that they may not receive funds for repeating courses which they have already passed.

Also, students who have received a degree from CFCC should be advised that the policy will not apply to courses which were taken to fulfill previous graduation requirements. A final student GPA (Grade Point Average) is computed at the time of graduation, and this GPA may not be recalculated as courses are repeated.

Grade Appeal Procedure

Purpose

The purpose of the Student Grade Appeal Procedure is to provide an orderly and equitable process for resolving differences between students and faculty relating to instructional processes, grading or situations in the classroom where the student believes he/she is being treated unfairly or arbitrarily.

Procedure

Step 1 The student with the conflict must first discuss the issue with the class instructor to attempt to resolve the difference. Every reasonable effort should be made to resolve the matter at Step 1. This initial conference must occur within fifteen (15) class days of the beginning of the subsequent school term.

Step 2 If a satisfactory resolution is not reached at Step 1, the student may contact the Department Chair seeking resolution. The student must contact the chair within ten (10) class days of the conference with the instructor. The Department Chair will seek equitable resolution by conferring with both the student and the instructor.

Step 3 If the student continues to be dissatisfied, he/she may, within five (5) class days of the date of notification of Step 2, file a written notice with the instructional dean responsible for the course in question (Dean of Arts & Sciences or Dean of Technical/Vocational Education).

The Dean will review and evaluate the conflict to determine what action, if any, should be taken to resolve the conflict.

Written notification of that determination will be sent to the student within fifteen (15) class days of receipt of students written notice.

Step 4 If the student is dissatisfied with the outcome of Step 3, he/she may file a written grade appeal with the Dean of Student Development. Within ten (10) class days of receipt of the written appeal, the Dean will convene the Academic Subcommittee of the Judicial Board to hear the conflict and make a final determination regarding the issue.

The committee will notify the Dean of Student Development of its decision.

The Dean of Student Development will notify the student of the Committee's decision. The decision of the Academic Subcommittee of the Judicial Board shall be final with no further appeals.

See Judicial Board section for committee membership.

Students dismissed from the clinical area in Allied Health and Nursing programs will follow the appeals process outlined in the program student policy book.

Satisfactory Progress Standards

Each student is expected to make satisfactory progress toward obtaining a degree or diploma. At the end of each quarter a students Grade Point Average (GPA) is examined. The minimum cumulative GPA for remaining in good standing is as follows:

Attempted Credit Hours	Diploma	Degree
1 - 23	1.25	1.25
24 - 40	1.40	1.40
41 - 59	1.70	1.55
60 - 80	2.00	1.75
81 - 90		1.90
90 or more		2.00

Probation and Suspension

A student who falls below the cumulative grade point average requirements will be placed on academic probation for the following quarter. A student placed on academic probation will be notified in writing by the Admissions and Records Office. A student on academic probation should schedule a conference with a counselor after he or she is notified about his or her probationary status. Any student on probation who fails

to make satisfactory improvement during the following quarter may be suspended or advised to enter a more appropriate program. Upon request, a student suspended for academic reasons may be readmitted if, after a conference with a counselor, it is determined that the student would benefit from continued academic pursuit. Subsequent suspensions could result in the student not being readmitted again. However, it should be noted that some academic programs are more restrictive than others and may require approval of the department chair to be readmitted to a program following academic suspension.

Right of Appeal

The right of appeal is granted to any student who has been suspended for academic reasons from Cape Fear Community College. To initiate such an appeal, follow the process outlined in the Grievance Procedure.

Special Note to Persons Attending Under the G.I. Bill

At any time a student, attending school under the G.I. Bill, fails to meet the required cumulative GPA, that student will be placed on academic probation for a period of one quarter. If, at the end of the probationary period, the cumulative GPA is below that required by the College, the Veterans Administration will be notified that the student has been "decertified" for G.I. Bill payment purposes. If such a student continues to attend CFCC, the Veterans Administration will be notified when the student has achieved an acceptable cumulative GPA. Recertification by the V.A. for pay purposes will be retroactive to the starting date of the quarter in which satisfactory progress resumed.

Cheating

Cheating is any practice which gives one student a dishonorable advantage over another student engaged in the same or similar course of study. It shall include, but is not limited to, the following: securing or giving assistance during examinations or on required work; the improper use of books, notes, or other sources of information; submitting as ones own work or creation of any kind that which is wholly or in part created by another; or altering of any grade or academic record.

When a faculty member observes cheating on the part of the student, the case shall be handled in accordance with the following procedures:

1. The faculty member shall notify the student who was observed cheating that he/she will receive a grade of F on the assignment or F in the course. The faculty member, however, shall afford the student an opportunity to clarify his/her position. If the student accepts a grade of F on the assignment, the student may remain in the class.

If the student accepts a grade of F in the course, the faculty member has the option of withdrawing the student from the class, with a grade of WF.

2. The faculty member shall submit a written report of the incident stating the facts and the action taken to the Dean of Student Development within three (3) class days from the time the incident occurred.

3. A student who considers the action taken to be unfair and who desires to appeal to the Academic Subcommittee of the Judicial Board, may present to the Dean of Student Development a written request within five (5) class days from the time the incident occurred.

Right of Appeal

The right of appeal is granted to any student who has been determined to be cheating at Cape Fear Community College. To initiate such an appeal, the student must submit a written appeal to the Dean of Student Development within five (5) class days after being notified of the action. The Dean of Student Development will present the appeal to the Academic Subcommittee of the Judicial Board within five (5) school days.

The committee will notify the Dean of Student Development of its decision.

The Dean of Student Development will notify the student of the Committee's decision. The decision of the Academic Subcommittee of the Judicial Board shall be final with no further appeals.

Requirements for Graduation

To receive the Associate in Applied Science Degree, Associate in Arts Degree, or a Diploma, a student must maintain satisfactory grades in all laboratory and class subjects and an overall C average and a grade point average of at least 2.00. Degree recipients must earn a minimum of 25 percent of credit hour requirements at Cape Fear Community College.

All CFCC graduates will possess competency in the basic use of computers. Students in programs not requiring specific computer competencies will be required to pass the Basic Computer Proficiency exercise offered through the Center for Academic Enhancement. Individual instruction is available in the CAE for students needing assistance with basic computer competencies. Results will be forwarded to Student Development and added to the students academic record prior to graduation. Students may also acquire basic computer instruction by taking a computer class.

Graduating students must file an application for graduation with the Student Development Department during the Fall Quarter prior to Spring and Summer graduation.

Scholastic Honors

President's List

Full time (12 or more quarter hours credit) students who have earned a grade point average of 4.00 will be placed on the President's List.

Dean's List
Full time (12 or more quarter hours credit) students who have earned a grade point average of 3.50 with no grade lower than a C will be placed on the Dean's List.

Honors List
Part time (less than 12 quarter hours and at least six quarter hours) students who have earned a grade point average of 3.50 with no grade lower than a C will be placed on the Honors List.

President's Award
Graduating students who have achieved an A average, defined as a cumulative quality point average of 4.0 are recognized each year for academic excellence at graduation exercises.

Graduation with Departmental Honors
Those members of the graduating class who have demonstrated outstanding leadership, attitude and ability will be graduated with departmental honors. Since these are departmental awards, recipients are selected by lead instructors in cooperation with appropriate faculty members.

Financial Aid

Cape Fear Community College participates in Federal, State and local programs designed to assist students and their families in meeting the rising costs of obtaining a college education. While the family is seen as the primary source for educational funds, these programs can help meet the costs.

Types of Aid Available

PELL Grant - A Pell Grant is an award to help students pay for college. PELL is awarded to those students who have not earned a bachelors degree and who demonstrate exceptional financial need as determined by the Federal Government.

Supplemental Grants (SEOG)-Supplemental Grants, like PELL, are awarded to students with exceptional financial need who have not earned a bachelors degree.

College Work Study Program-Work Study provides financially qualified students the opportunity to earn money to help pay for college expenses.

A **Stafford Loan** is a low-interest loan made to financially qualified students to help pay for college expenses. This loan must be repaid.

PLUS Loans-A PLUS loan is a loan made to qualified parents of students to help the family pay for college expenses. This loan must be repaid.

State Programs
North Carolina Student Incentive Grant Program is a grant program based on exceptional financial need.

Local Programs
Private scholarships may be available to assist with educational costs. These scholarships may be based on financial need, academic excellence or a combination of both.

Applying for Financial Aid

The free application for Federal Student Aid (FAFSA) is needed to apply for the financial aid package. This financial aid package may include PELL, SEOG, Work Study, NCSIG and loan eligibility.

The application for the federal aid program MUST be mailed to the Processing Center in Iowa City, Iowa and may require six to eight weeks for the first part of processing.

The summary reports that students will receive from the Processing Center are called Student Aid Reports (SARs). The SARs must be submitted to the Financial Aid Office. The second part of processing will be completed by CFCC's Financial Aid Office and may require four to six weeks.

Documentation

Certain documents are required for all students applying for financial aid. Additional documents are required based on the particular circumstances or information relating to the Student Aid Reports.

The Financial Aid Office will inform students of the forms and information required to complete their file.

Awards/Notification

Students will be notified of the award of financial aid by an Award Letter. This letter will list the dollar award and the program (example: PELL or SEOG).

Students must indicate whether they accept or decline the award, sign the letter and return a copy to the Financial Aid Office by the due date on the letter before any funds will be drawn for them . Failure to return this letter could cancel an award.

If students are not eligible to receive financial aid, they will receive a letter notifying them of their status.

Financial Aid recipients are required to maintain satisfactory progress toward completing a degree or diploma.

Tutition/Fees/Books

After an award letter is received in the Financial Aid Office, an account is set up for the student in the computer system at CFCC. This account includes monies listed in the student's award letter.

When a student registers for classes, the amount of tuition and fees will be deducted from his/her computer account. This will be done in the Business Office when he/she completes the registration procedures.

Books may be purchased in the CFCC Bookstore. When a student completes a request form in the Financial Aid Office, his/her computer account may be used to cover bookstore costs. If there are not enough monies in his/her account (award), he/she must pay the difference.

Workshops

Workshops are available to assist the student in completing Financial Aid applications. Contact the Financial Aid Office for days and times.

Right of Appeal

The right of appeal is granted to any student who has been suspended from financial aid programs at Cape Fear Community College. To initiate such an appeal, the student must submit a written appeal to the Financial Aid Office.

Scholarships

Scholarships available as of the printing of this publication are as follows:

Endowed Scholarships (scholarships are needs-based unless otherwise noted):

Deborah G. Britt Memorial Scholarship - (Endowment still developing-proceeds not available at this time.)

William A. Clark Memorial Scholarship Fund - Tuition scholarship for a full-time student with career goals to enter the legal profession.

Dr. Hubert A. Eaton, Sr. Academic Scholarship Fund - A scholarship for tuition, general fees, parking fees and books for a full-time student.

Efson, Inc. Scholarship Fund - (Endowment still developing-proceeds not available at this time.)

Forty & Eight of the American Legion Registered Nursing Scholarship - Tuition scholarships open to Registered Nursing students at CFCC who have been residents of Brunswick, Columbus, New Hanover or Pender Counties for a minimum of five years.

Interroll Corporation Academic Scholarship Fund - (Endowment still developing-proceeds not available at this time.)

Wilber W. Kirk Scholarship- Tuition scholarship for a full-time, second year Marine Technology student.

Leslie-Locke Scholarship Fund- (Endowment still developing-proceeds not available at this time.)

Tabitha Hutaff McEachern Academic Scholarship Fund - Scholarships for tuition, general fees, parking fees and books for full-time students.

Jessie Harper Newbold Memorial Fund - Scholarships for tuition, general fees, parking fees, and books for Licensed Practical Nursing students.

Peoples Savings Bank, SSB Scholarship Fund - One annual scholarship for a student in the Light Construction Program and one two-year scholarship for a student in a Business program.

Ratcliffe-Richardson Academic Scholarship- (Endowment still developing-proceeds not available at this time.)

Joseph M. & Barbara S. Schwartz Academic Scholarship Fund - A scholarship for tuition, general fees, parking fees and books.

George H. West Memorial Scholarship Fund - A scholarship for tuition, general fees, parking fees and books.

Wilmington Business & Professional Women's Scholarship Fund - A scholarship for tuition, general fees, parking fees and books for a student preparing to develop a business or professional career.

Scholarship/Loan Fund:

River Enterprises, Inc., Scholarship/Internship Program - An annual fund established to provide financial assistance to full-time students in the Hotel and Restaurant Management program.

Scholarships:

AARP - A partial tuition scholarship for an Associate Degree Nursing or Practical Nursing student who is a resident of New Hanover or Pender County.

American Welding Society - Tuition scholarship for a full-time student in the Welding program.

Ava M. Hobbs Scholarship/Riverfest - Tuition scholarships for full-time Marine Technology students.

Cape Fear Section of the Instrument Society of America - A scholarship for tuition, books and fees for a second year Instrumentation Technology student.

Carolina Power and Light Company - Tuition scholarships for residents of North Carolina enrolled in a two-year technical or college transfer program.

Cotton Exchange Scholarship - Tuition scholarship for a full-time student.

Herbert T. Fisher Scholarship - Tuition scholarship for full-time students.

James Walker Nursing Memorial - Tuition scholarships for Associate Degree Nursing Students.

John P. Frandsen Memorial Scholarship (Society of Manufacturing Engineers) - A partial tuition scholarship for second year students in a program within Engineering Technology.

Lisa Gail Otis Memorial - Tuition scholarship for full-time students. The recipient must maintain at least a 2.00 GPA.

Ministering Circle Memorial Nursing Scholarship - Scholarships for tuition, books and fees for students in the Associate Degree Nursing program.

National Restaurant Association - A scholarship for tuition, books and fees for students in the Hotel and Restaurant Management program.

New Hanover Regional Medical Center Auxiliary, Inc. - Partial tuition scholarship for a student in the Practical Nursing program.

North Carolina Community College Scholarship Program - Full-time and part-time scholarships. Students must be North Carolina residents and maintain a GPA at or above the level required for graduation.

Olde Point Garden Club - Tuition scholarship for a student in Marine Technology.

Pioneer Service Roofing and Sheet Metal Company Scholarship - Tuition scholarship for students enrolled in the building trades.

Southern Bell Telephone and Telegraph Community College Scholarship - A tuition scholarship for full-time students who must maintain a GPA at or above the level required for graduation.

Wachovia Bank and Trust Company Technical Scholarship - A scholarship for a second year student in a two-year technical program.

Wilmington-Cape Fear Home Builders Association - Scholarships for full-time students in the Light Construction program.

Wilmington Cape Fear Rotary Club - The Club selects recipients.

Wilmington Machinery Scholarship - A scholarship for tuition, books and fees.

Wilmington Women's Club - Scholarships for Associate Degree Nursing students.

Veterans Affairs

The educational benefits available under the G.I. Bill are administered by the Veterans Administration which is the final authority for determining eligibility. These benefits are not only available to eligible veterans, but also to the spouses and children of certain categories of living and deceased veterans, and to certain active duty military personnel, reservists and members of the National Guard.

Prospective students who believe they may be eligible for G.I. Bill benefits should contact the Veterans Affairs Office at the school.

Vocational Rehabilitation

This is a program operated through the Division of Vocational Rehabilitation in cooperation with the North Carolina Department of Administration. The Division finances such services as are necessary to enable a physically or mentally employment-handicapped person to become self supporting. If a prospective student has a physical disability or is limited in his/her activity because of a disability, he/she should contact the nearest Division of Vocational Rehabilitation Office. The Division Office for North Carolina is located at 709 Market Street, Wilmington, NC.

Expenses

Tuition

Tuition is established by the North Carolina State Legislature and is subject to change without prior notification.

Tuition is due and payable on the day of registration. Any deferred payment or exceptions must be approved by the Chief Fiscal Officer. If tuition is a major factor in the students determination to attend CFCC, the student should contact the Financial Aid Office as soon as possible.

Payments can be made by cash, check, MasterCard or Visa. Students must bring credit cards to the Business Office to charge payments.

Activity Fee

A nonrefundable activity fee is charged to all curriculum students for the Fall, Winter, and Spring quarters. This fee is paid at the following rate: *$1.00 for every two (2) quarter hours of credit taken up to a maximum of twelve (12) quarter hours. The maximum fee charged is *$6.00 per quarter.

Funds collected from activity fees are used to support the costs of student publications, athletics, and social activities sponsored by the Student Government Association.

Identification Card Fee

A fee of *$1.00 will be charged for a photo I.D. card to all curriculum students. The photo I.D. card is valid for two consecutive years and will be validated each quarter. This card must be presented by the returning student, at the time of registration, or he/she will be required to purchase a new card.

Parking Permits
Parking permits may be purchased for *$8.00 at the time of the students initial registration. Parking permits are valid through August of the current school year.

Insurance
The College provides student accident insurance for curriculum students at no charge to the student. This is subject to change each fiscal year.

Students may purchase health insurance; the enrolment forms and fee information are available in the Business Office.

Nursing students are required to purchase professional liability insurance. The cost of this insurance is presently *$15.00.

Paramedic students are required to purchase paramedic professional liability insurance. The cost of this insurance is presently *$32.85.

Textbooks and Hand Tools
Students are expected to purchase textbooks which are usually available from the school bookstore at the beginning of each quarter. Although not required in all courses, students are encouraged to buy hand tools, generally required for apprentices in the area of their training. The bookstore does not have a charge or credit system; therefore, books and tools must be paid for at the time of purchase.

Bookstore
The CFCC bookstore is located on the first floor of the M.J. McLeod building. The bookstore provides textbooks, supplies and other collegiate materials. Hours of operation and policies governing textbook refunds and buy-backs are posted in the bookstore.

Refund
A preregistered curriculum student who officially withdraws from any/or all classes prior to the first day of the College's academic quarter will be eligible for 100 percent tuition refund. Fees are nonrefundable.

A 75 percent refund will be made if the student officially withdraws during the period starting from the first day and ending on the 20 percent day of the quarter.

A student is not officially withdrawn until he/she processes a formal withdrawal form with the Admissions and Records Office. The effective date of withdrawal is the day the Admissions and Records Office receives the form.

Return Check Guidelines
Tuition payment made with a check returned by the bank will be considered nonpayment of tuition. Students will lose their classes or will not be able to attend classes until full restitution is made. Absences incurred due to nonpayment of fees will be counted in accordance with the College attendance policy.

Transcript of Record
Upon written request of the student, a transcript of credits earned at Cape Fear Community College only will be sent to other schools and/or industry. The first transcript request is free of charge; each additional transcript request will cost *$2.00.

Graduation Fees
Fees for graduation are not included in the activity fee. The cost for caps and gowns are paid by the student directly to the company representative from whom they are being ordered. At present the cost is approximately *$21.00.

(*Applicable fees at time of printing are subject to change without notice.)

Institutional Indebtedness
No student will be permitted to graduate nor will a transcript be issued until all financial obligations to the College are satisfied.

Personnel in the Armed Services
Any active duty member of the armed services who qualifies for admission shall be charged the out-of-state rate but will pay the in-state rate with the difference being waived.

Any dependent relative of a member of the armed services who is abiding in this State incident to active military duty while sharing the abode of that member shall be eligible to be charged the in-state tuition rate.

Student Activities

Extracurricular activities are a very important part of the total educational program at Cape Fear Community College. Student activities is an integral part of the fulfillment of the College's mission by providing a variety of activities that enrich students lives. The goals of these activities are to accommodate student diversity in backgrounds, abilities, interest, and career goals; enhance academic success; and promote diplomacy, unity, self discipline, physical and emotional well-being, and leadership skills.

Athletics and Intramural Activities
College athletics may include basketball, softball, golf, tennis, soccer and volleyball depending on student interest and facilities availability. Individuals participating in college activities must have school insurance, be taking five (5) curriculum credit hours or more, and be in good academic standing.

College athletics enrich the academic, social, self discipline, competitiveness and leadership abilities of the student.

The goals and objectives of college athletics are listed below.

Goals:

To enhance academic success of student athletes

To provide opportunities for participation in competitive college sports

To promote the development of self discipline and leadership skills

Objectives:

Monitor the academic grade point average of student athletes

Develop and monitor sport activities based on student interest as gleaned from Student Interest surveys

Monitor the retention and graduation rates of student athletes

Social Activities

The social development of the student is a very important phase of the total educational program at Cape Fear Community College. Under the sponsorship of the SGA, social events include dances, field days, cookouts and various other student body activities.

CFCC Clubs

The following clubs are recognized by CFCC:

Alpha Chi Sigma (PTK)
Bible
Collegiate Secretaries International
Criminal Justice
Drafting and Design
Industrial Electricity
Instrumentation
Machining Technology
Multi-Cultural
NC Association of Nursing
Paralegal
Philosophy
Republicans
Spanish

The Phi Theta Kappa International Honor Society encompasses the upper ten percent (10%) of all students enrolled in the two-year college system. Alpha Chi Sigma is the CFCC Chapter of Phi Theta Kappa. Membership in Alpha Chi Sigma is extended by invitation only. To be eligible, a student must be: enrolled in a regionally accredited institution offering an associate degree program; full-time (12 credit hours) students must have completed at least 18 hours of course work leading to an associate degree and grade point average (GPA) of 3.5; part-time (less than 12 credit hours) students must have completed 18 hours and have a GPA of 3.6 and must enjoy full rights of citizenship.

New Club Procedures

Any student group desiring to be recognized as an official CFCC club must submit to the Director of Student Activities 1) the club purpose, 2) the proposed club constitution, and 3) the financial intent (collection and expenditures of money).

Upon completion of these requirements, it will be necessary for the proposed club to be approved respectively by the Student Government Association, the Director of Student Activities, and the Dean of Student Development.

All club information must be annually updated with a list of the years current officers and advisors. This information must be submitted to the Director of Student Activities office in order for a club to be reorganized for the current fiscal year.

Student Publications

The Sea Devil and The Informer, written and edited by students, are supported by student activity fees. They are supervised by an academic advisor, the Director of Student Activities, and the Dean of Student Development. The editorial freedom afforded to student editors also involves parallel responsibilities that are governed by canons of responsible journalism, such as the avoidance of libel, indecency, vulgarity, undocumented allegations, attacks on personal integrity, and the techniques of harassment and innuendo.

The President has the authority to determine responsible journalism and to prohibit the publication of any material in violation of the canons of journalism.

Student Government Association

The Student Government Association (SGA) is the official organization authorized by the administration to represent all students at Cape Fear Community College. The SGA is a democratic organization and as such elects officers each year. The State Board of Community Colleges, the CFCC Board of Trustees, and the administration, faculty, and staff fully support the SGA. This support is most visible in the office of the SGA President who, upon election to that office, automatically becomes a member of the Board of Trustees and the College Council. Additionally, students have SGA representatives on standing college committees. These committees are charged with annually reviewing and recommending changes to the College.

The Student Government Association is a very active organization; it is the voice of the student body and has paved the way for good lines of communication between students and administration. Students receive practical experience in responsible citizenship through participation in a program of self-government.

The SGA is governed by its Constitution and Bylaws. Copies of these documents are available in the SGA Office.

Alumni Association

Although alumni associations are thought to be made up primarily of former students and friends, the CFCC Alumni Association encourages students to participate while still attending school. Information about the CFCC Alumni Association is available in the office of the Director of Student Activities.

General Information

Change of Name/Address

If a student should have a name or address change while enrolled at the College, he/she should fill out an INFORMATION UPDATE FORM in the Admissions and Records Office

Dress

Where special dress or safety devices are required by the College, North Carolina Community College System, regulations, or public law, the student will be expected to fulfill those requirements. Students are expected to maintain good personal grooming consistent with the ordinary requirements of industry.

Food Services

Hot food and snacks are available in the student lounge which is located on the first floor of the M. J. McLeod (S) Building from 7:30 AM to 9:00 PM Monday through Thursday; 7:30 AM to 8:00 PM Friday; and 9:00 AM to 1:00 PM Saturday.

Game Rooms

Billiards, video games, and table tennis are located in the cafeteria area on the first floor of the M.J. McLeod (S) Building and are open daily during normal school hours.

Graduation Needs

Orders for caps, gowns and class rings will be accepted by a company representative during announced dates. Students who anticipate graduating at the close of Spring or Summer quarters will be provided a limited number of commencement announcements.

Housing

The College does not have housing facilities. However, upon request and if known, school officials will provide to students information concerning available housing. Students are advised to have a clear understanding with landlords regarding all rental and/or lease agreements.

Lost and Found

The Admissions and Records Office will accept articles found on campus and, if not claimed, store them for six months. Articles not claimed within six months will be given to a nonprofit organization.

Parking

The student parking lots are located two blocks north of the Wilmington campus, diagonally across from WWAY television station. The parking lots will accommodate 486 vehicles. At the present time the annual parking fee is $8.00.

Handicapped parking is provided at each of the Wilmington campus buildings. Behind the Galehouse Building there are three wheelchair and nineteen handicap/special parking spaces; the Electronics Technology Center has two spaces; the Burnett Building has two spaces. Disabled persons wishing to park behind the Galehouse Building should stop at the parking attendants station for assistance.

Telephones

Pay telephones are available for students to use at any time. Students are requested not to use phones located in college offices unless it is an emergency.

Incoming calls for students will be honored only in the case of emergencies.

Student Expectations, Rights and Responsibilities

Student Records

CAPE FEAR COMMUNITY COLLEGE RESPONSIBILITIES UNDER THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974 (THE BUCKLEY AMENDMENT)

Under the Family Educational Rights and Privacy Act of 1974, the rights of the student and the responsibilities of the institution concerning the various types of student records maintained by the institution are established. Consistent with this legislation, Cape Fear Community College establishes the following policy to ensure compliance. Failure to comply with standards prescribed in the Act could jeopardize federal funding received by the institution and its students.

Rights of Students

In compliance with the law, an individual becomes a student when he/she registers at the the College. Upon reaching age 18 or attending an institution beyond the high school level, the student has the right to view his/her own school or college records. These records include the academic transcript of the College post-secondary transcripts, high school transcripts, and other documents maintained as part of the students permanent file with the exception of confidential letters of recommendation. All permanent academic records are housed and maintained in the office of the Director of Enrollment Management.

CFCC requires written authorization from the student prior to release of academic records. A minimum of 48 working hours will be required by the College to assess the requested academic information. The student may inspect, copy, and review his/her records in the Director of Enrollment Managements Office. There may be a charge for copies.

Rights of Parents
Parents of a child who is under the age of 18 and has never attended an educational institution beyond high school level has the right to inspect and review that child's academic records. After a student reaches the age of 18 or enters a post-secondary institution, the parent will be denied access to the students academic record unless the student gives written consent. The College assumes that all students are independent adults attending an institution designed for adult education. Parents do have the right to review the academic records of their child if they are claiming the child as an income tax deduction; however, they must show proof of the claim.

Rights of Faculty
The faculty of the College has a legitimate educational interest in a students academic records. Therefore, access to those records is authorized by the institution. Along with this access comes certain obligations and responsibilities.

A faculty member shall not access educational records of any student for which he/she does not have a direct advisory responsibility. Those with direct advisory responsibility include the current instructors of the student, the students faculty advisor, and the appropriate department head and division chair. A faculty member not professionally associated with a student shall not access educational records of the student without the written consent of the student.

A faculty member shall not disclose any information from a students record to a third party (i.e., other students, other faculty members, employers, etc.) without the written consent of the student. Parents of the student do not have special access rights and should not be given information without the students written consent.

A faculty member shall be responsible for the security of all academic information in his/her possession. These records must not be accessible to other students and unauthorized personnel.

A faculty member shall refrain from disclosing academic information by phone without the expressed written consent of the student.

Rights of Administration
Student Development and specifically the Director of Enrollment Management's Office, has the responsibility of maintaining and safeguarding the academic records of all students of the College. Consistent with this responsibility, the personnel of Student Development will access student records as needed. However, these individuals bear the responsibility for ensuring that no unauthorized disclosure of student academic information occurs without the expressed written consent of that student.

The President, Vice-President and Deans of the College may access student records when needed to facilitate the students educational pursuit.

Educational records of a student will not be accessed for employment decisions without the expressed written consent of the student. Information from student academic records may be shared in aggregate for educational research purposes.

Directory Information
Directory information includes name, major field of study, full time/part time attendance, the most recent college attended, dates of attendance, and degrees and awards received.

Students have the right to withhold disclosure of any directory information by completing a request for nondisclosure in the Director of Enrollment Management's Office. Requests for nondisclosure must be filed annually. The College assumes that a student's failure to file a request for nondisclosure indicates approval for disclosure.

The complete text of The Buckley Amendment is available for review in the Office of the Director of Enrollment Management.

Conduct

It is expected that at all times the student will conduct himself/herself as a responsible adult. Participation in any activity which, in the opinion of the administration, disrupts the educational process or functioning of the College may result in disciplinary action. Specific violations of conduct include, but are not limited to the following:

a. destruction of school property
b. stealing
c. cheating
d. gambling
e. use of profane language
f. engaging in personal combat
g. possess or carry, whether openly or concealed, any weapon on campus; the only exception to this directive is in the case where training or job requirements of the students or employee requires that such be carried
h. possession and/or use of alcoholic beverages
i. possession and/or use of any drug as defined under the North Carolina Controlled Substance Act, G.S. 89-90 through G.S. 90-94

Violation of these rules of conduct will not be tolerated in or on any part of the campus, its satellites, equipment it operates, or wherever its employees or students are required to be while performing their duties as employees or students. Any violation of these standards of behavior may result in dismissal from the College.

Additional classroom rules will be designated by instructors or supervisors and must be followed by all.

Any person observing conduct violation(s) should immediately contact the Dean of Student Development.

Conduct Probation and Suspension
Any student whose conduct becomes unsatisfactory may be placed on conduct probation; however, a student is subject to immediate suspension if deemed necessary by the Dean of Student Development. Any misconduct after a person is placed on conduct probation may result in prompt suspension.

Right of Appeal
The right of appeal is granted to any student who has been suspended from Cape Fear Community College for conduct violations. To initiate such an appeal, follow the process outlined in the "Grievance Procedure" section.

Weapons on Campus

It is unlawful for any person to possess or carry, openly or concealed, any weapon on campus. The only exception made to this directive is in the case where training or job requirements of the student or employee requires that such a weapon be carried.

Crime Awareness and Campus Security Policy

I. Cape Fear Community College adheres to the following Crime awareness and Campus Security Policy.

A. In case of an accident, illness, criminal actions, and other emergencies, the Dean of Student Development must be notified immediately. (If any of the above situations occur at any campus site (example: Pender County Satellite) the appropriate Director of that location must be notified.

B. The Director of Institutional Services or the designee is responsible for security and access to all campus facilities.

C. Campus law enforcement is handled by a local security agency. When further action is necessary they seek assistance from city police or county law enforcement.

D. Violations involving the possession, use, and sale of alcoholic beverages, possession and/or use of any drug as defined under the N.C. Controlled Substance Act will not be tolerated in or on any part of the campus, its satellites, equipment it operates, or wherever its employees or students are required to be while performing their duties as students or employees. Any violations of these standards of behavior may result in dismissal from the College.

E. All incidents (criminal and security) must be reported to the Dean of Student Development (day) or Duty Administrator (night) and/or campus security guards.

F. All incidents (crime and security) must be reported on the appropriate form and turned in to the Dean of Student Development.

II. Security Operations

A. Cape Fear Community College (CFCC) has a contract with a local, professional security firm to provide security for the Wilmington campus as well as off campus facilities (example: Roland Grise) when classes are being held or when it is requested by sponsors of special events. An on-site security system is in place at both Pender county facilities. These systems are tied into local police departments.

B. The guards have portable radios and are constantly patrolling. Should any event requiring security occur, the guards are to contact the City of Wilmington Police (station is one-half block away) and then try to control event until police arrive. Events are reported to the appropriate personnel after the situation is under control. Security escorts are available to walk students, faculty and staff to their car at night. The switchboard operator, located on the second floor of the McLeod Building, will arrange escorts.

III. Information concerning crime awareness and campus security procedures and practices are disseminated to students and employees through the following

A. Faculty, staff and student handouts.
B. Catalog and Student Handbook.
C. Orientation.

IV. Information data on crime and security violations will be collected effective August 1, 1992. Results of the data will be reported and available for distribution to interested parties.

Judicial Board

Cape Fear Community College supports students' constitutional right to due process. The Judicial Board is the vehicle to insure the right of appeal.

The Judicial Board will consist of thirteen (13) representatives from all areas of the College-faculty, staff, students and administration. The entire board will hear appeals concerning academic suspension, conduct suspension and charges of discrimination and/or denial of service on the basis of race, color, national origin, age, religion, handicap or sex.

The Judicial Board's subcommittees will act on other categories of student appeals. The subcommittees, areas of responsibility, and composition are listed below.

Academic Subcommittee of the Judicial Board
The subcommittee will hear appeals in the matter of cheating and grades. The subcommittee consists of three (3) faculty and three (3) students. One faculty member is to be chosen from each of the academic areas-vocational, technical, and college

transfer. The chairman will be selected by the committee from the faculty.

Financial Aid Subcommittee of the Judicial Board
The subcommittee will hear appeals concerning suspension from the College's financial aid programs. The committee will consist of one (1) representative from the following areas-Fiscal Services, Student Development, faculty, and student. The chairman will be selected by the committee.

Residency Status Subcommittee of the Judicial Board
The subcommittee will decide matters of residency status for tuition purpose. The committee will consist of one (1) representative from each of the following areas-Student Development, Fiscal Services, and student. The committee will select its chairman.

Grievance Procedure

The right of appeal is granted to any student who has been placed on academic suspension, conduct suspension or feels he/she has been discriminated against or denied service on the basis of race, color, national origin, age, religion, handicap or sex.

To initiate such an appeal, the suspended student must submit a written appeal to the Dean of Student Development within five (5) class days after being notified of the suspension. The Dean of Student Development will present the appeal to the Judicial Board within five (5) class days of receipt of the written appeal. The Dean of Student Development will notify the student of the Judicial Board's decision. The decision of the Judicial Board shall be final with no further appeals.

Written Student Complaints

As a matter of practice, CFCC subscribes to the philosophy that student complaints are best resolved on an informal basis. When a student has a complaint he/she should attempt to resolve concerns with college personnel having responsibilities directly at the source of the complaint. When informal procedures do not resolve concerns, written student complaints should be sent to the Dean of Student Development who will determine the appropriate college personnel to review the complaint. The student should receive written acknowledgment of the complaint from the Dean of Student Development within five (5) working days.

The complaint will be reviewed and a collaborative effort will be made to resolve the complaint. Within twenty (20) working days of receipt of the complaint, the student will receive notification of the resolution of the complaint, or of the College's position on the complaint.

Sexual Harassment

Discriminatory personal conduct, including sexual harassment toward any member of the College, is a violation of both State and Federal law and school policy and cannot be tolerated in the College community.

All members of this school community are expected and instructed to conduct themselves in such a way as to contribute to an atmosphere free of sexual harassment. Sexual harassment of any employee or student by any other employee or student is a violation of the policy of this school and will not be tolerated.

Requests for sexual favors and other unwelcomed verbal or physical conduct of a sexual nature by any employee or student constitutes sexual harassment when:

submission to such conduct is made either explicitly or implicitly a term or condition of an individuals employment, academic or student status, or

submission to or rejection of such conduct by an individual is used as the basis for employment decisions affecting that individual, or

such conduct has the purpose or effect of interfering with an individuals performance or creating an intimidating, hostile, or offensive environment in the workplace or the classroom.

Any student who believes that he or she has been subjected to sexual harassment in violation of this policy should make a confidential complaint to one of the Student Development counselors. If this is not feasible, the student may take the complaint to the Dean of Student Development.

Evacuation of Buildings

An evacuation diagram is located on each floor and in each room of every building. The primary route for evacuating a building is indicated by a solid red line. If, for any reason, the primary route is blocked, use the secondary escape route indicated by a broken red line on the diagram. All occupants will follow this procedure EXCEPT HANDICAPPED PERSONS: CFCC staff will make provisions for all handicapped persons to be evacuated from the building.

Emergency Evacuation

Everyone must exit the building when the fire alarm sounds. IT IS NOT AN OPTION TO REMAIN IN THE BUILDING. Treat all alarms as the real thing.

Student/Employee Drug and Alcohol Policy

Cape Fear Community College is committed to providing an educational atmosphere that is free of substance abuse and encourages healthy and safe lifestyles. Listed below is information on Cape Fear Community Colleges policy on drugs and alcohol, health risks involved in drug/alcohol abuse, North Carolinas laws regarding drug use, and community resources pertaining to substance abuse.

The use and abuse of drugs and alcohol are subjects of immediate concerns in our society. These problems are extremely complex and ones for which there are no easy solu-

tions. From a safety perspective, the users and/or abusers of drugs or alcohol may impair the well-being of all employees, students, and the public at large, and may result in property damage to the College. Therefore, in compliance with the Federal Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act Amendments of 1989, it is the policy of Cape Fear Community College that the unlawful use, possession, distribution, manufacture, or dispensation of a controlled substance or alcohol, is prohibited while on College premises, the College workplace, or as part of any College sponsored activity. Any student violating this policy will be subject to disciplinary action up to and including termination or expulsion and referred for prosecution.

1. Cape Fear Community College does not differentiate among unlawful users, sellers, or pushers of drugs or alcohol. Any employee or student who uses, possesses, sells, gives, or in any way transfers alcoholic beverages or a controlled substance is subject to disciplinary proceedings by the College, and referred for prosecution.

2. The term controlled substance means any drug listed in CFR part 1308 and other federal regulations, as well as those listed in Article V, Chapter 90 of North Carolina General Statutes. Generally, these are drugs which have a high potential for abuse such as: Marijuana, Cocaine, PCP, Heroin, and Crack among others. They also include legal drugs that are not prescribed by a licensed physician. The term alcoholic beverage includes beer, wine, whiskey and any other beverage listed in Chapter 188 of the General Statutes of North Carolina. Persons within the College community are responsible for knowing about and complying with the Cape Fear Community College Drug/Alcohol Policy.

3. Any employee or student who unlawfully possesses, uses, sells, or transfers alcoholic beverages or illegal drugs to another person; or who is convicted of violating any criminal drug or alcoholic beverage statute while in the workplace, on College premises, or as part of any College sponsored activity, will be subject to disciplinary action by the College up to and including termination or expulsion, and referred for prosecution. Specifically, any such person convicted of a felony, or a misdemeanor which results in an active prison sentence will, if a student, be expelled, or if an employee, be terminated from employment (subject to existing disciplinary policies applicable to state or federal law which may apply to employees). Other misdemeanors or convictions will be evaluated on a case-by-case basis and the specific penalties may range from written warnings with probationary status to enrollment expulsions and employment discharges. The College may also require the employee or student to successfully complete a drug abuse treatment program as a precondition for continued employment or enrollment. Persons charged with illegal drug/alcohol involvement may be suspended pending any legal proceedings if, it is determined by the President, or his designees that the persons continued presence within the College would pose a serious and immediate danger to the health or welfare of other persons within the College.

4. Each employee or student is required to inform the Personnel Director or the Dean of Student Development, respectively, in writing within five (5) days after a conviction of any criminal drug or alcoholic beverage control statute where such violations occurred in the College workplace, on College premises, or as part of any College sponsored activity. A conviction means a plea of or a finding of guilt (including a plea of nolo contendere) and the imposition of a sentence by a judge or jury in any federal or state court.

For those students or employees receiving or working under a federal grant, the College must notify the United States governmental agency from which a grant was made within ten (10) days of receipt of such notice from the grant employee, or otherwise after receiving actual notice of a criminal drug conviction. Appropriate disciplinary action will be taken by the College within 30 calendar days from the receipt of such notice. The law requires that all employees abide by this policy as a condition for continued employment on any federal grant.

Community Services

Aids Hotline	343-6653
Alcoholics Anonymous	762-1230
Ambulance, Fire, Police, or Sheriff	911
Cocaine Hotline	1-800-222-0828
Columbia Cape Fear Memorial Hospital	452-8100
Crisis Line	392-6936
Dept. of Social Services	341-4700
Domestic Violence Shelter & Service	343-0703
Missing Children Help Center	343-6559
Narcotics Anonymous	1-800-234-0420
NHC Health Department	343-6500
NHC Human Relations Commission	341-7171
New Hanover Regional Medical Center	343-7000
Rape Crisis Center	392-6936
Southeastern Center	251-6440
The Oaks	343-7787
Wilmington Treatment Center	762-2727
YMCA	251-9622
YWCA	799-6820

For referrals to a community service agency, see a counselor in Student Development.

EXTENDED SERVICES

Continuing Education Department

General Course Information

CFCC provides training in many areas through its Continuing Education Department programs. Classes are held at the Wilmington downtown campus and at other locations throughout New Hanover and Pender counties. Most classes prepare individuals for employment, or upgrade workers already employed. Besides meeting economic needs, some classes help to improve the adults social and cultural standing in the community.

Training is also provided for employees of area industries and public agencies. Once a specific need has been established, classes can be offered in that area at virtually any time. Full details can be obtained by calling the office of the Dean of Continuing Education, (910) 251-5670.

Admission Requirements

Generally, any person who is 18 years of age or older, or whose high school class has graduated, is eligible for admission to Continuing Education classes. Applicants are usually admitted on a first-come, first-serve basis. Some classes have specific admission requirements. In such cases, applicants will be properly notified.

Registration and Special Information

For information concerning the current class offerings, and their locations in New Hanover county, call (910) 251-5670. For Pender County classes, CFCC Burgaw Campus, call (910) 675-1439/ 259-4966. For CFCC Hampstead Campus classes, call (910) 270-3069.

The Pender County CFCC Burgaw Campus is located in the Burgaw Industrial Park. This location is approximately five blocks south of downtown Burgaw next to Burgaw Middle School.

The Pender County CFCC Hampstead Campus is located in the former Topsail Middle School, Hampstead.

Students register at their first class meeting. The individual's Social Security Number is required for registration. Course cost (tuition) will usually be $35.00 plus the cost of any required text(s) and supplies. A high school diploma is not required for registration. Registration fees for Continuing Education Department classes are not always refundable. The Refund Policy, as set forth by the North Carolina General Assembly, follows in the next paragraph. Many classes are FREE for N. C. citizens 65 years of age or older. However, for classes designated as self-supporting all students must pay the tuition fee and costs for required text and supplies.

Refund Policy

Please note the following Refund Policy for EXTENSION PROGRAMS, Statutory Authority G.S. 1150-5; Eff. February 1, 1976; Amended Eff. September 1, 1993; August 1, 1983; August 17, 1981; July 8, 1980.

.0203 EXTENSION PROGRAMS
(d) Registration Fee Refunds. A refund shall not be made except under the following circumstances:

(1) For classes that are scheduled to meet four times or less, a full refund shall be made upon the request of the student, if the student officially withdraws from the class(es) prior to or on the first day of the class(es).

(2) For classes that are scheduled to meet five or more times, a full refund shall be made upon the request of the student if the student officially withdraws from the class(es) prior to or in the official 30% point of the class(es).

(3) For classes beginning at times other than at the beginning of the quarter, applicable provisions as noted in Subparagraphs (d) (l) and (2) of this rule apply. For contact hour classes, 10 calendar days from the first day of the class(es) is the determination date.

IMPORTANT: Occupational extension courses are designed for the specific purposes of training individuals for employment, upgrading the skills of persons presently employed, and retraining others for new employment in occupational fields. Students repeating an Occupational Class more than two times may be charged a higher tuition fee based on actual class contact hours.

Continuing Education Program Offerings

Emergency Medical Technician Programs—For information & class schedules, call (910) 251-5681.

Emergency Medical Technician training prepares the student to perform basic patient care in a pre-hospital setting. After successful completion of the course, a state examination is required for certification.

Truck Driver Training Program - For information & class schedules, call (910) 251-5643

The Truck Driving School is designed to teach students to drive tractor-trailers and trucks. The program will prepare the prospective driver to understand safety, driver responsibility, and also the laws and regulations governing the motor carrier industry.

Insurance Programs - For information & class schedules, call (910) 251-5681

CFCC's Continuing Education Department provides continuing Education classes for Certification for Insurance Agents as mandated by the North Carolina Department of Insurance. Provider #9090.

Nurse Aide Program - For information & class schedules, call (910)251-5681

Nurse Aide Level I - Prepares graduates to provide personal care and perform basic nursing skills for the elderly and other adults.

Nurse Aide Level II - Prepares Nurse Aides to perform more complex nursing skills.

Nurse Aide Refresher - A fifteen (15) hour Refresher Course designed for skill/competency testing of Nurse Aide employees.

Family & Adult Home Care Programs - For information & class schedules, call (910) 251-5681

Family Care Home-Personal Care Training - A twenty (20) hour training program for aides in family care homes who perform basic personal care tasks.

Adult Care Home-Personal Care Training - A forty (40) hour training program for personal care aides in adult care homes of seven or more residents and homes for developmentally disabled adults who perform basic personal care tasks.

Electrical Contractors' Renewal Course Programs—For information, call (910) 251-5681.

The Electrical Contractors' Renewal Courses are held throughout the year. This provides Electrical Contractors the six hours of mandatory continuing education credits required to maintain a license.

Real Estate Program - For more information, call (910) 251-5689

CFCC offers eight (8) hour Seminars designed to provide Real Estate Agents their required continuing education credits as mandated by the North Carolina Real Estate Commission. Provider #1021.

Concealed Carry Safety Course -For information & class schedules, call (910) 251-5689

Teaches the aspects of the N.C. Concealed Carry-Handgun law including fundamentals of safety and basic marksmanship. 6 hours of classroom and 3 hours range training.

EPA/CFC Refrigerant Recovery/Recycling Certification Exam - For information & schedule, call (910) 251-5689

Course designed for HVAC Technical personnel to assist in meeting EPA mandated training requirements in preparation for the N.C. State Board of Refrigeration Examiners.

Leisure & Recreational Courses - for information & class schedules, call (910) 251-5689

Courses offered in Pottery, Painting and Photography

Computer Instructional Programs—Call (910) 251-5689 for information on classes at Fort Fisher & CFCC-Wilmington. Call (910) 259-4966/675-1439 for classes at CFCC-Burgaw, and (910) 270-3069 for classes at CFCC Hampstead.

Computer classes are offered throughout the year. New classes begin monthly. Check the various CFCC campuses for computer courses currently available.

N.C. General Contractors Residential Licensing Seminars—For information, dates and times, call (910) 251-5689.

Basic Skills Division

The Basic Skills Division includes the following programs for adults 16 years of age or older, who wish to begin, continue, or expand their educational skills: Adult Basic Education (ABE), General Education Development (GED), Adult High School Diplomas (AHS), Compensatory Education (CED), English As A Second Language (ESL), Human Resources Development Program (HRD), and Employment Readiness Training (JTPA). All classes are offered free at convenient times and locations. Anyone under 18 years of age must have school and parental release forms.

Adult Basic Education (ABE) Classes—For information, on dates and times call (910) 251-5641.

The ABE program is for persons 16 years or older who have not graduated from high school and who function below the 9th grade reading level. Students receive individualized instruction in basic math, language, and reading. These classes improve adults' basic skills so that they can enroll in and successfully complete their GED or Adult High School Diploma classes.

General Education Development (GED) Classes
For information on dates and times, call (910) 251-5641.

The GED program is for persons 16 years or older who have not graduated from high school and function above the 9th grade reading level. Students receive individualized instruction to prepare for the five areas of the GED exam. Persons who pass the GED will receive a high school equivalency certificate. GED classes are offered on all CFCC campuses.

Pre-GED Tests
For information on test dates and times, call (910) 251-5641.

Anyone wishing to take the GED test must first pass the Pre-GED test. There is no charge for this pretest.

GED Tests
For information on test dates and times, call (910) 251-5143.

Individuals wishing to take the high school equivalency exam must provide proof of age, identity, and N. C. residency. (A valid N. C. Driver's License or N. C. Special ID will satisfy these requirements.) A Pre-GED pass form as well as your social security number are required. The cost of the GED test is $7.50.

Adult High School Diploma (AHS) Classes
For registration dates and times, call (910) 251-5682.

The AHS program is for persons 16 or older who have not graduated from high school and wish to obtain a high school diploma. Students take courses to complete the required 20 units and must also pass the N. C. Competency Test. To enroll, students must furnish a transcript of previous high school credits and have proper release forms if under 18 years of age.

Compensatory Education Program Classes
For information, call (910) 251-5678.

This program prepares adults with mental retardation to be self sufficient. Areas of classroom instruction include community living, consumer education, vocational education, math, social science, language, and health. Documentation of mental retardation is required before enrollment.

English As A Second Language (ESL) Classes
For more information, call (910) 251-5683.

This program is for adult students whose native language is not English. Instruction focuses on English skills that will enable students to interact effectively in the community and at the work place. Persons wishing to attend classes may enroll at the class sites.

Human Resources Development Program (HRD)—For information, call (910) 251-5686.

The Human Resources Development (HRD) Program offers continuous six-week classes throughout the year to help adults who are unemployed, underemployed, or looking for further education. Programs are subject to change without notice.

HRD teaches job preparation skills such as resume writing, correctly completing job applications, and interviewing skills. Self-awareness, motivation, and self-esteem building are also stressed through this program. Other HRD courses are tailored to address specific areas. Examples of these are Basic Typing Refresher, and Basic Computer Refresher. Family Enrichment/Parenting classes are also offered. All HRD classes are free to the public.

Workforce Development Training/JTPA Program
For information on dates and times call (910) 251-5687.

The Workforce Development Training Program (WDTP) provides employment and training services to JTPA (Job Training Participant Act)-eligible persons enrolled in the HRD, ABE, GED, and the New Hanover and Pender County "Look First" Programs. The main function of the WDTP is to provide assistance for JTPA-eligible participants as they develop employable skills.

Single Parent/Displaced Homemaker Program—For more information on dates and times call (910) 251-5687.

The Single Parent Program provides educational and instructional costs, and other assistance, to single parents and displaced homemakers seeking to enroll full time into curriculum programs.

Center For Academic Enhancement

On the sixth floor in the rear of the library, students may receive individual and small group instructional facilitation in curriculum courses after submitting a signed Instructor Recommendation Form. Assistance in the Center is designed to help students acquire needed skills in their course work that enables them to be more successful in their studies.

The Center maintains a resource of software programs that students can use to review and prepare for assignments. The supplemental computer assisted instruction is available on an individual student basis. Two multimedia computers are available that provide assistance in course work and are available for student research.

The Center also offers support for courses in computer applications. Instructional facilitation is available to supplement classroom instruction and to assist students in completing assignments.

The hours of operation for the Center for Academic Enhancement are Monday through Friday, 8:00 A.M. to 10:00 P.M. and Saturday, 9:00 A.M. to 1 :00 P.M.

Business and Industry Services

Small Business Center (SBC)

As one of fifty-eight member colleges in the Small Business Center Network, the SBC strives to increase the number and the success rate of small businesses in New Hanover and Pender Counties.

Services include:

- **Training** - seminars, workshops and mini-courses on business management skills.
- **Information** - A resource center for SBA publications, pamphlets, books and videos on small business topics.
- **Consulting and Referral** - One-on-one confidential counseling with business management consultants.

Additionally, the SBC is the Regional Export Center for the **EXPORT OUTREACH PROGRAM**, a workshop covering the essentials of the export process. The course is designed as a refresher for current export staffers or to bring those new to exporting up to speed.

Telephone registration is required for SBC events; call (910) 251-5696 or Fax (910) 251-5698.

Occupational Extension

Single courses designed to:

- Train individuals for employment
- Upgrade the skills of those presently employed
- Retrain for employment in new occupational fields.

Also, customized programs can be developed to meet the particular training needs of the requesting business, industry or agency.

New and Expanding Industry

The New and Expanding Industry program is designed to:

- Assist the developing infrastructure of the area
- Develop and deliver training for the production man power of any new, relocating or expanding industry in our service area
- To encourage the development of long range training programs within industry.

Focused Industry Training (FIT)

FIT is intended for workers who need to update their skills and technical knowledge because of technological changes. Training can be held at CFCC, the firm's site or another appropriate location.

The FIT program provides for the:

- Assessment of your firms training needs
- Development and delivery of customized training programs for skilled and semiskilled workers employed in industrial occupations.

The FIT program is offered in partnership with the Business and Industry Services Division, North Carolina Community College System.

Apprenticeship Training

Offered in partnership with the NC Dept. Of Labor, this program is designed to provide the specific skills associated with a trade. On-the-job training, combined with classroom instruction, develops the employees' hands-on-skills, and results in the award of a certificate as a journeyman in the trade.

For information on Business and Industry Services, call (910) 251-5696 or (910) 251-5699.

Film Production Programs

Wilmington is one of the leading film production centers in the country, and CFCC offers short classes and seminars in technical skills. Geared toward improving job skills and prospects, many of the seminars and classes take place in cooperation with Carolco Studios, the hub of the industry in the southeastern United States. Governor Jim Hunt recently announced 1995's film industry job creation as 32,840, mostly here in Wilmington. CFCC is working to help keep those jobs in our area. Some previous offerings include *Production & Location Management, Electricity & Light,* several *Screenwriting* seminars, *Using the Internet, Audio Engineering, Wardrobe, Cinematography, Panavision Cameras,* and more. For more information, call Bruce Evans, film production coordinator, at (910) 251-5150.

Film Production Programs

CFCC offers short classes and seminars in technical film production skills. Geared toward improving job skills and prospects, many of the seminars and classes take place in cooperation with Carolco Studios, the hub of the industry in the southeastern United States. For more information, call (910) 251-5150.

Distance Learning

The NC Information Highway is a partnership for the purpose of developing a fiber optic interactive-video, distance-learning network for North Carolina universities, community colleges, public schools, and medical centers. This is an interactive video network in North Carolina. CFCC has a site at our main campus and a site at our Burgaw campus.

Each site contains a classroom equipped with the monitors, cameras, and microphones necessary for interactive sessions with all sites.

Offerings on the network include two types:
Courses - Long term courses (semester/quarter length) take precedent over short term events and must be submitted through the Vice President for Instruction, 251-5125.

Short Term Events - These events should be scheduled through the Vice President for Instruction, 251-5125.

Teleconferencing

Cape Fear Community College has downlink capabilities via a satellite dish to receive teleconferences which may originate from anywhere in the nation. These teleconferences represent a wide range of interests including: Health Care, Higher Education, Law Enforcement, Small Business, Photography, plus many more.

These teleconferences are shown in the Teleconference Center (S-501) and broadcast over large screen television monitors. The Teleconference Center has a seating capacity of 50 persons.

Telecourses

Cape Fear Community College offers, on a semester-to-semester basis, various courses for credit that are delivered by television. These independent-study courses are aired on your local Public Broadcasting Service (PBS) station. As a telecourse student, you are required to come on campus fewer times than students in traditional classroom settings. You must, however, attend an orientation session and take course tests on campus. The TV programs serve as your lectures. You will have an instructor whom you should contact for any help with the course. You register for telecourses in the same manner as you would for any other curriculum course. Some courses are college transfer. Check with your advisory about particular telecourses. Refer to current schedule for telecourse offerings.

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